

COAL AGE

The Only National Paper Devoted to Coal Mining and Coal Marketing

C. E. LESHER, Editor

Volume 22

NEW YORK, THURSDAY, AUGUST 31, 1922

Number 9

What of the Business Revival?

PRICES and wages are going up. Every indication is for a busy and prosperous winter. Talk of business revival is in the air. The Steel Corporation has increased wages 20 per cent, making the pay of unskilled labor \$3.60 per day, in an effort to hold the men that might be attracted to the coal mines, where the wage is again to be \$7.50 per day. Liquidation of wages and prices has been estopped for the time being. The big question remaining concerns the permanence of the boom that appears to be on us. This is of interest to the coal industry because of what it portends after March 31, 1923.

It may be premature to speculate on next summer, and quite likely fruitless, but for coal it is important. The industrial storm this year may be largely traced to the effort made to liquidate wages in the unionized coal mines, and the end of the general movement due to the failure of the struggle in coal—that is, failure for all except the coal miner. Whether or not there will be a repetition of the effort next year and whether that effort will be accompanied by a coal strike will depend on the strength of the industrial revival, so called, and on the outcome of efforts yet to be fully inaugurated for preventing open breaks in coal wage negotiations in the coal industry.

The most important and at present the most apparent factor in the quickening of business is the absence of stocks of coal and of iron and steel products, traceable directly, of course, to the shortage of coal. As is noted in the monthly survey of business by the Department of Commerce, production has been descending for some time and prices have been going up. The twin strikes are held accountable for this state of affairs. Iron furnaces have been banked by the score, foundries are without pig, and a huge demand for iron in all forms is backing up on the manufacturers. Deliveries cannot be promised, for the furnaces are actually short of coke and but now are getting the supplies they need.

The railroads have been making a fine showing despite their strike, but they have not met all the demands placed on them and he would be shortsighted who would not anticipate still further and important shortages of transportation as the crops are offered to the rails and as coal mines get back to operation. Prices of coal are dropping from their peak—\$8 coal was followed by \$7 coal and that in turn by \$6 coal. The trade is unsettled but a cross section of opinion seems to hold to the belief that the market will settle down to around \$5 for the winter.

Will business function on a boom basis with coal at that figure? Just how sturdy is this revival? If it is predicated only on the making up of shortages caused by the strikes, then it will not be longlived. If it is that and something more, then it will live through. No one thinks that the demand for coal in the coming months

will be as insistent as during 1920, that the country can or will absorb as much at as high figures as then. Theoretically stocks of coal in the hands of consumers are reduced to zero, and in fact they are lower than ever before recorded. The demand will be strong until that hole is filled, but beyond that point the strength of the coal market will depend on the persistence of general business activity.

The soft-coal requirements of the United States during the first six months of this year were very close to an average of 8,000,000 net tons per week. Consumption has declined since July 1. The two largest consumers, the railroads and the iron and steel industry, have used less, largely because they could not get it. The coal strike actually caused plants to shut down and fewer trains to move. It is not unlikely that from 8,000,000 tons per week consumption has fallen to nearer 6,000,000 tons in recent weeks. As production gains and prices recede that figure will increase.

If the present revival is the beginning of a secondary period of inflation, to be followed by another effort at deflation, and very competent opinion holds to that view, then we will experience a second effort to lower coal-mine wages after March 31, 1923.

King Lewis I

CREDIT without stint is given the United Mine Workers as the greatest labor organization in the world. On every hand the press and private comment confess to the remarkable victory of the miners in the soft-coal strike. Recorded history, we are told, has no counterpart for the struggle in the coal industry this year. With every factor dead set against the union miners, they pulled themselves out of the hole—even though they may have pulled the shopmen in—and they now stand the acknowledged victors, conquerors alike of the mine management and owner, of the government and of the people.

And John L. Lewis is crowned the hero of it all. He is the mighty force that held the army of 600,000 together, held the bucking broncos, Farrington and Brophy, in line, encouraged the line force and inspired the heavy artillery of propaganda, pulled the wires in Washington, confounded the administration and walloped the operators. Like the boy wonder, the chess player from Austria, he lone-handed moved his pieces on a score of boards, outfighting a score of separate individual operator groups each electing to play its own game. They are all cleaned up now, save one that he has stalemated and one that is not quite played out.

By the editors of the country John L. Lewis is hailed as King, Dictator, and with other equally choice and endearing encomiums. Some refer to the conclusion of the strike as unionism gone wild. Some class him with the renowned and redoubtable George Baer of 20 years ago. His loyal followers flock about him and do lip service, telling him how mighty and how wonderful he is.

It is not necessary, however, to quote the press on the greatness of John L. Lewis. He admits it. We wonder what the public that is getting excited over the revelation of power held by this one man would say were they to hear Mr. Lewis tell how mighty he is. Picture him pacing back and forth across the room where he is supposed to be negotiating a contract with operators—let us say, for instance, in Philadelphia last week with the anthracite producers. Hear him say, for instance: "You ask me why I will not accept arbitration; why I will not accept even recommendatory arbitration with freedom to accept or reject the findings. Why, gentlemen, because I know that by any comparison made, whether with the cost of living, earnings, wages in other industries, however arrived at, the miners lose. We will not have our wages and earning compared with others to our disadvantage. That method of adjusting wages is out of date for us."

Or perhaps the subject was the life of the contract, the little matter of wages having been settled in advance as the highest ever recorded. Perhaps the operators have said that they could not agree to pay those wages beyond next April, because they did not know what the price of bituminous coal would be, an important factor in selling steam sizes, comprising from 30 to 40 per cent of their output. Mr. Lewis demands in the hard-coal region a contract to run until March 31, 1924. To the objection of the operators he perhaps said: "Let that not worry you. The price of mining bituminous coal is not coming down. *I have the soft-coal men wrapped around my little finger.*"

Or as a peroration: "They told me I could not do it. College professors, economists, business men, my best friends and advisers said it was folly to undertake a strike this year, to try to hold coal miners' wages up to the post-war heights. *But, gentlemen, I have done it.*" Can't you just hear the rumble of that basso voice and see the shake of that magnificent mane? What an autobiography John L. Lewis would write today!

Choose an Able Commission

COAL legislation in three forms is being considered in Washington. Just plain inquiry heads the list in popularity, some method of controlling prices follows and outright seizure of the mines is latest and last.

The first, a commission of inquiry, is favored on every hand. As to the form of the investigation there is little discussion but the character of the commission has provoked much argument. The miners' union wants to have some of its people on that body, arguing that unless it is represented the commission cannot get the facts and will not know what to do with the data when it gets them. This argument has much merit, but is completely overshadowed by the counter argument that were they to have representation the commission would have to agree with their contentions entirely or there would be a minority report. The country wants no minority report and it therefore is saying keep both miners and operators off.

We earnestly hope an able commission will be appointed, that it will have ample powers, ample funds and ample time to make its study and report. In its anxiety to save the country from freezing, Congress will, it is hoped, come to some better method of getting coal out of the ground than taking over the mines. It is not the ownership that is holding up production of hard coal and laws cannot make the men dig coal.

British Miners and Coal for America

VARIOUS attempts to restrain the British miner from producing coal for America failed, as they were bound to fail. The fact that the proposal was vetoed at the recent Miners' International Congress held at Frankfort-on-Main may be regarded as conclusive evidence that the miners' leaders desired to abstain from interference in the matter. It has been pointed out that the miners in Great Britain were justified in the course they have taken, owing to the American miners' refusal to co-operate during the coal stoppage in Britain last year. This seems an excellent reason why the British worker should retaliate, but there is a still more practical one. It is obviously impossible for the miners to stop producing coal for America without ceasing production altogether, since it is not within their knowledge to which of the overseas markets the coal they produce is sent. Furthermore, it was mainly the non-union miners in this country who produced the coal for export that helped to break the strike in Great Britain last year.

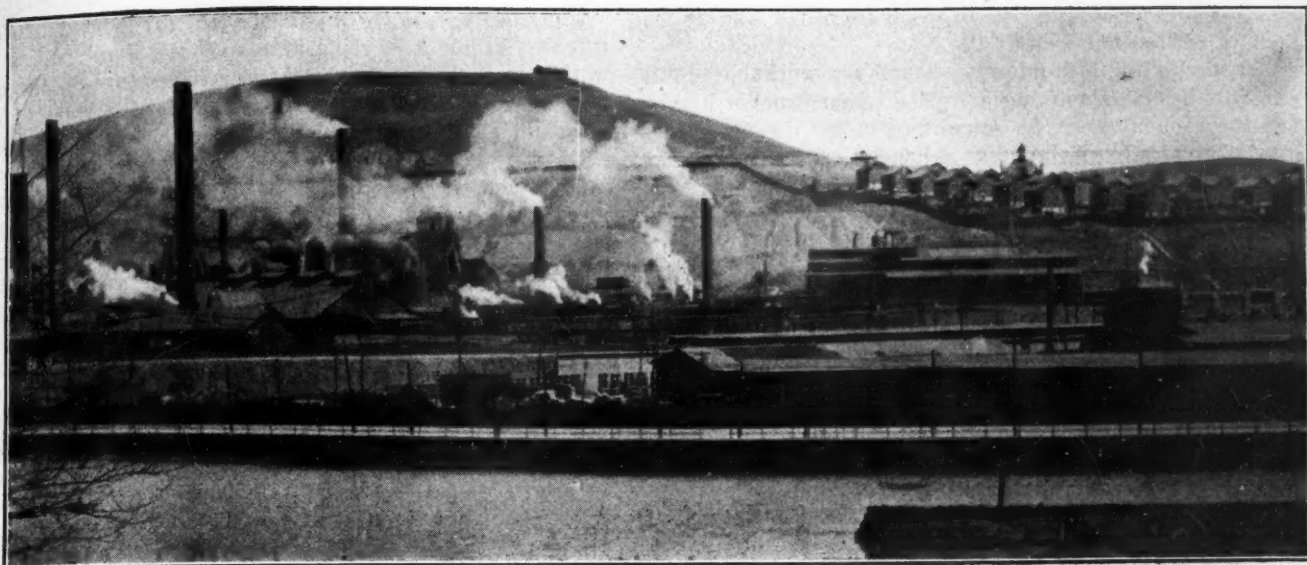
British exporters are not reaping a financial harvest from their business in this country. American buying has been judicious in the main and carefully executed. Owing to the dull state of the export trade when the inquiries from this country first began the purchasers were able to obtain what are now considered by London as remarkably favorable terms. As a matter of fact the charter market has been as important an influence in determining the c.i.f. price of British coal in New York or Boston as has the price f.o.b. Cardiff.

It is clear that the British miners are doomed to disappointment in so far as they have been anticipating high wages later resulting from high prices and substantial margins over costs by the British export trade from the American business.

It will be remembered that last year in less than three months Great Britain bought and imported from this country some three million tons of soft coal at her own price. There was no perceptible increase in the market as the result of the British purchase of our coal in 1921. Under similar circumstances of dull market, low prices and idle mines, British coal men selling America not over two-thirds as much coal as we sold them last year record a market rise of 5s. or more in a month.

SOME OF THE OPERATOR GROUPS are reported in the press to consider that they emerge partial victors from this strike. Central Pennsylvania producers, for instance, announce that inasmuch as they negotiated a "district" agreement with District No. 2 of the United Mine Workers in so far as they deviated from the Cleveland contract by omitting provision for a gathering in October they beat John L. Lewis, who held out for no district settlements. These operators are just fooling themselves if they really think that way. Their victory is akin to that of the prisoner in the late war who was permitted to retain his trousers, although his suspenders were removed. Illinois operators, signing exactly similar terms, openly announce that they have been compelled to surrender.

KIN HUBBARD, HOOSIER HUMORIST and originator of Abe Martin, had this to say of the coal strike settlement: "The coal strike has been all settled fine an' dandy an' temporarily."



Cambria Steel Co. Drops Coal Down Well, Loads It at Bottom and Hauls It to Ovens*

Coal Is Passed Down a 110-Ft. Shaft from an Upper Bed to a Lower and Is Reloaded for Two-Mile Run to Rosedale Ovens—Electrically Actuated Gates Load Through Measuring Hopper

BY GEORGE A. RICHARDSON†
Philadelphia, Pa.

THE excellence of the iron ores in the vicinity of Johnstown, Pa., and the abundance of timber for the manufacture of charcoal fuel resulted in the development of many small iron furnaces in the early part of the last century. The presence of large coal deposits, in turn, aided in stimulating the business and maintaining it after local ores were no longer used.

The inception of what ultimately developed into the Cambria Steel Co. dates back to the year 1842 but it was not until 1855 that the first rolling mill was completed and put in operation. At the same time what is known as the Rolling Mill mine was opened. This mine, with the exception of three years (1888, 1889 and 1890), during which time natural gas displaced coal at the works of the Cambria Iron Co., has been in continuous operation ever since.

ONE SEAM YIELDS 20,000,000 TONS IN 67 YEARS

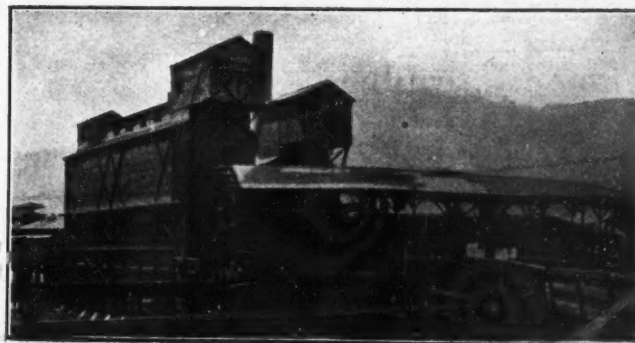
An excellent idea of the extent of the operations is to be gained from the figures that follow. In the sixty-seven years that have elapsed since the opening of the mine more than 20,000,000 net tons of coal have been produced from the C' seam alone. Despite the large amount that has been removed there is still remaining in the C' seam in the territory allotted to this mine an unmined tonnage of nearly 40,000,000, or twice the ton-

nage that has been removed since the mine was opened.

The record yearly production for this mine was made during 1905, when 804,188 net tons of coal was produced. The record production for any one month was made in May, 1907, when 79,875 net tons was dumped, and the daily record was made as recently as May 31, 1921, when 3,872 net tons was extracted.

This mine has worked over the largest territory of any single opening in the country, covering an area of approximately 10 square miles. The distance to the farthest working face is 5 miles.

From these figures it will be seen that the transportation problems at this property are unusually difficult and that the tonnages to be handled are larger than those in most single coal-mining operations. These drawbacks make imperative the introduction of the most modern



ABANDONED COAL TIPPLE OF ROLLING MILL MINE

This structure was used until April, 1922, after which the coal produced in the mine was dumped down the Elk Run shaft to be loaded into mine cars and hauled to Rosedale, where it is hoisted and conveyed to coke ovens.

NOTE:—The frontispiece shows part of the Cambria plant of the Cambria Steel Co. and the Conemaugh River where the eight-track viaduct from the Rolling Mill mine would have crossed had it been constructed. Ample justification is shown for boring down and under, especially in view of the automatic devices by which the cost of transport by such original and unusual methods is reduced to a minimum.

*First part of an article on the Rolling Mill mine.

†Midvale Steel & Ordnance Co., Cambria Steel Co.

methods if production is to be maintained and to be performed economically.

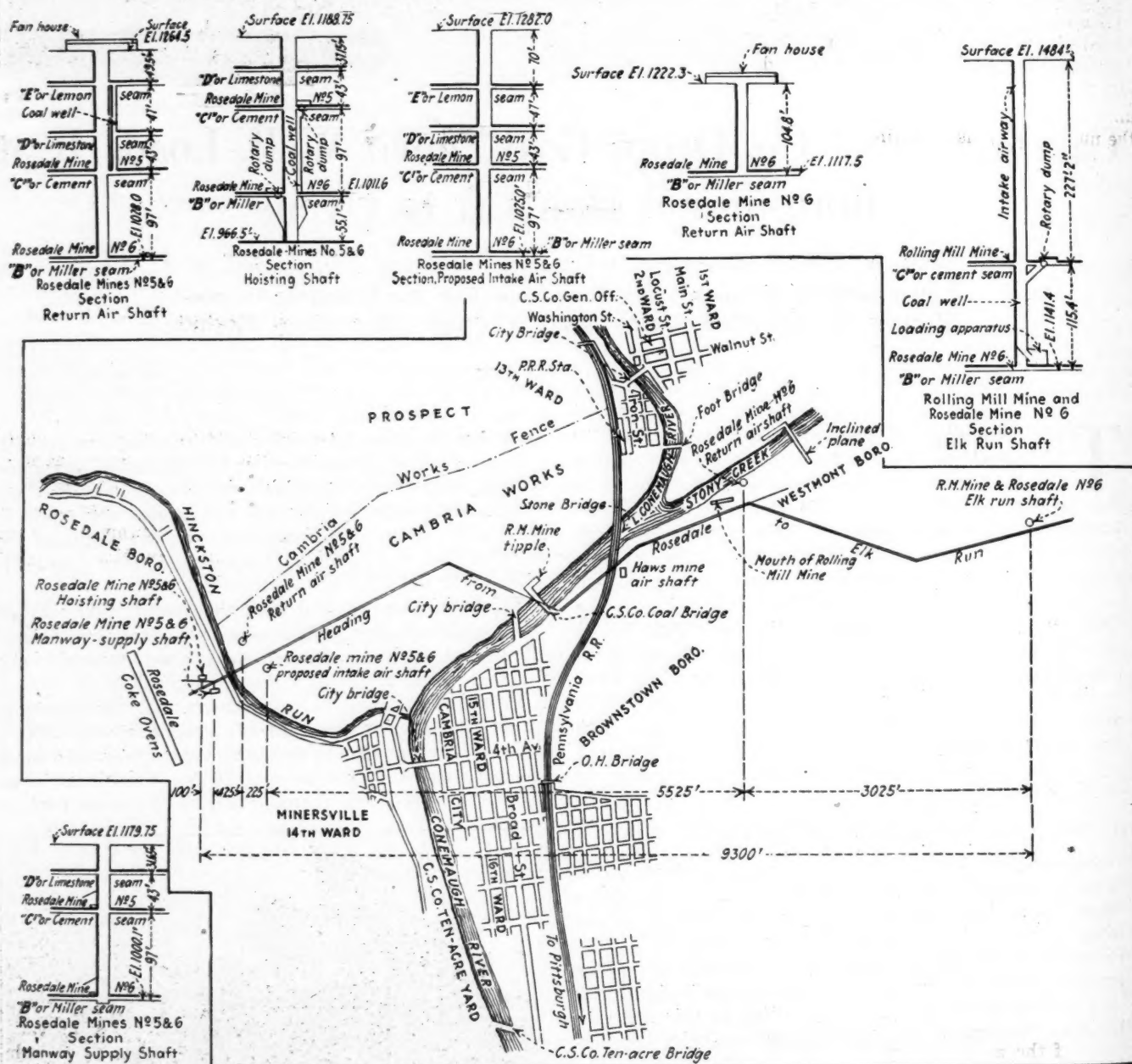
At the Rolling Mill mine two seams are workable. Both are in the Allegheny series. The upper, known locally as the Cement seam, is sometimes called the C¹, but is more generally designated as the Upper Kittanning. From it the Rolling Mill mine has obtained all its tonnage. It is a bright, horizontally bedded coal, the height of which averages about 3 ft. 6 in. At an average depth of about 110 ft. below this seam lies the Lower Kittanning bed, known as the Miller or B seam.

The roof is exceptionally good, in general being of black slate. It requires little or no timbering. In the new development which is to be described the main heading in the Miller seam has a length of more than two miles, and throughout its length no timber is used.

Until quite recently this coal was transported by six different kinds of haulage before it was finally dumped on the tippie. These consisted of mules, storage-battery locomotives, trolley locomotives, head-and-tail rope, grip-rope and chain haulage.

Until 1881 all the coal produced in this mine was handled entirely by mules, which hauled it from the mine across the Conemaugh River and directly into the steel works in small mine cars. The coal was all mined by hand.

In 1881 small steam locomotives were introduced to haul the coal from the main sidetrack, which is about a mile and a quarter back in the mine, this being a system of haulage that has seldom been attempted in the mines of this country. The coal was delivered to the main sidetrack with mules, and the dinkeys, or



PLAN SHOWING MINES OF CAMBRIA STEEL CO., WITH PARTS OF THE CITY OF JOHNSTOWN AND SUBURBS AND CROSS SECTIONS OF THE SHAFTS.

Note the long underground roadway from the Elk Run shaft on the right, at which point coal is dropped down a well from the Cement seam to the Miller seam. The section of this shaft, or coal well, is shown in the upper right-hand corner. The roadway passes under Westmont Borough and

under the Conemaugh River on its way to the hoisting shaft of mines Nos. 5 and 6 in Rosedale. This shaft is located on the far side of Hinckston run, near the Rosedale coke ovens. At that point a well passes coal from No. 5 mine, Cement seam, down to No. 6 mine in the Miller seam. The section

of this shaft is shown in the second illustration in the upper left-hand corner. Had the coal been taken above ground to the Rosedale plant in accordance with the original plans it would have interfered with operations of the Cambria Steel Works and the cost would have been excessive.

steam locomotives, hauled it outside and distributed it directly into the mills.

This method was again changed in 1890, when the present tippie was built and a rope was installed. The mules continued to be used for gathering the coal to the main sidetrack.

As the mine developed further and further under the hill, the need for additional haulage facilities arose. In 1898 a compressed-air plant was installed in the Mill Creek valley, the mine was piped for compressed air and a number of air locomotives were installed and used for hauling the coal from the different sections to the main sidetrack, where it was picked up by the rope haulage. Mules were still used to gather coal from the working faces.

In the same year (1898) compressed-air coal-cutting machines were installed for undercutting the coal, greatly adding to the number of tons per miner.

The development of the mine over a still larger area made necessary the installation of five electric storage-battery locomotives in 1916-17. Until this time the gaseous condition of the mine would not permit of the installation of trolley locomotives and electric coal-cutting machines, but in 1918, owing to the excellence of the mine ventilation and the improvement of the gas conditions, the management and the state mine inspector considered it safe and in keeping with the state mining code to electrify a portion of the mine.

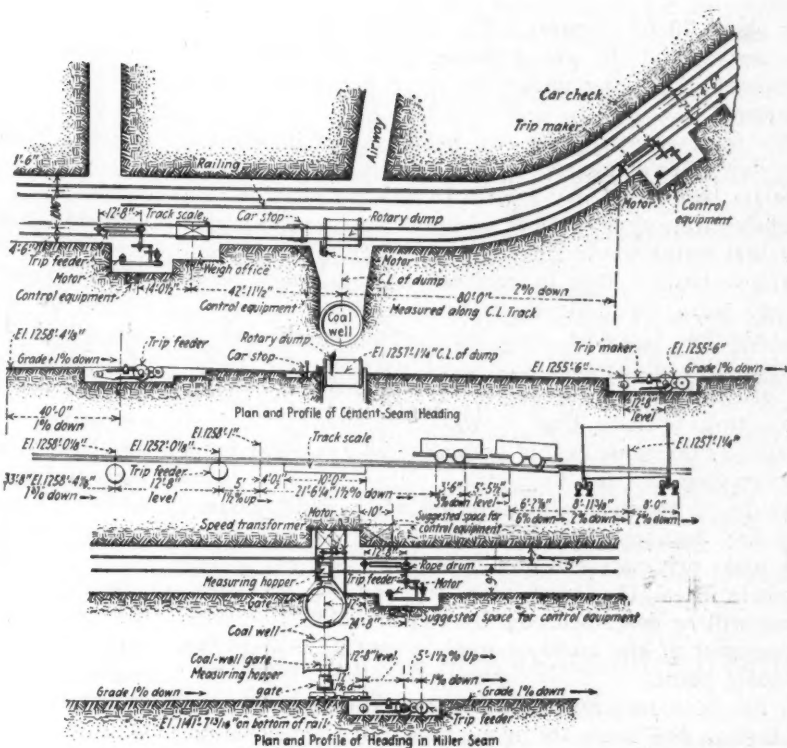
As a result the electric trolley motors were put in use in this mine for the first time in its history, and in January, 1919, this was followed by the installation of a modern electric coal-cutting machine, the first that the Rolling Mill mine has ever used. The introduction of electricity eliminated the use of the compressed-air locomotives, many mules and several air-cutting machines and air pumps. Hence, despite the fact that the mine has been in use practically without a break for 67 years, the equipment is among of the most modern in the country.

WITH NEW OVENS CAME NEW MINE EQUIPMENT

The practice of conveying the coal from the mine to the tippie, located in the Cambria plant, by means of rope haulage was continued until April, 1922. In 1916 what is conceded to be one of the best and most modern byproduct coke-oven plants in the country was designed for a location in a deep valley near the Cambria plant, through which flows Hinckston Run, the new installation known as the Rosedale plant. The carrying out of this design was commenced in 1917 and completed in 1922. Here care is taken of the entire output of the Rolling Mill and Rosedale mines.

One of the most important problems to be solved was the conveyance of the coal from the Rolling Mill mine to the Rosedale shaft. Several plans were considered and in explaining these it will be helpful to refer to the diagram which shows the relative location of the various openings.

The first plan considered involved the construction of an eight-track viaduct over the Conemaugh River



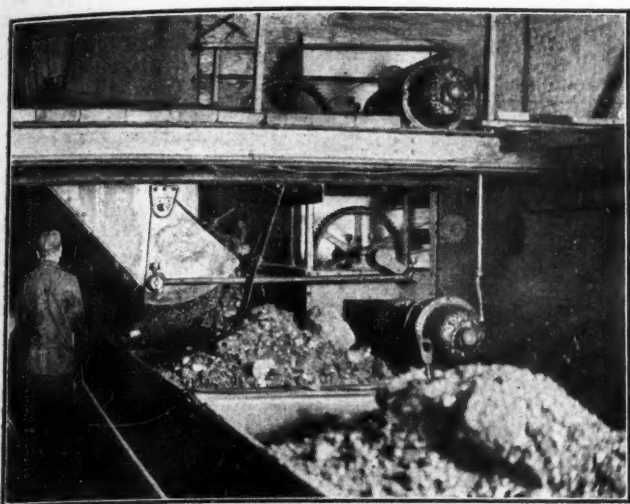
REVOLVING DUMP TRIP FEEDER AND COAL WELL
AT ELK RUN SHAFT

The coal is discharged from cars by a rotary dump in the Cement seam to a measuring bin above the Miller seam being weighed before dumping. The seams are 115 ft. apart. The trip feeder will handle as many as 110 cars at the rate of six or seven cars per minute. The feeder in the Miller seam will handle 130 cars. They can be filled at the rate of six cars per minute, the action of the delivery mechanism being automatic. The upper figure is a plan and the next below a profile of the car-handling layout in the Cement seam. Below this is a larger-scale profile of the same from the trip feeder to the rotary dump. Under these again are a plan and profile of the car-handling layout in the Miller seam.

from the Rolling Mill mine and the Miller seam into the upper end of the Cambria plant, the building of a new tippie, etc., at an estimated pre-war cost of \$1,500,000, which would have meant three to four times as much during the war and the period immediately following. This plan had serious disadvantages. To begin with, the cost was high. More important, however, was the fact that congestion would be increased at a place that was already congested. Johnstown lies in a narrow valley between high, steep-sided hills, and the level space so necessary in steel-plant operation is always at a premium. Lastly, it would be necessary to haul the coal from the tippie to Rosedale, necessitating additional trackage through the plant and the use of still more space that was valuable for other purposes. On the diagram the location of the entrance to the Rolling Mill mine, the space occupied by the rope-haulage system, viaduct, tippie, etc., are all indicated.

The second plan proposed involved a radical departure from the first and there was some question of its practicability. It was finally adopted, however, and brought to a successful completion. This new plan involved the entire abandonment of the old system of rope haulage, the viaduct, tippie, etc., and the introduction of direct communication with the Rosedale plant through a heading from the Elk Run shaft of the Rolling Mill mine driven in the lower coal bed, which is known as the Miller, or B, seam.

The greatest difficulty with this plan and the one which gave rise to a fear that it was impracticable lay in the fact that it was necessary to drive the heading under the Conemaugh River and at a level which allowed



LOADING CARS FROM COAL WELL AT ELK RUN SHAFT

A motor-driven gate lets enough coal to fill one car pass from the coal shaft to the measuring bin. Another gate also opened by a motor, allows the coal to drop into the car below. The cars pass at the rate of 65 ft. per minute. As each car approaches the chute it forms a contact opening the lower gate.

stops are provided in the dump, these being connected by levers to a treadle at the dump entrance.

The dump is so arranged that each car entering it will open the car stops and push the empty car out at the opposite end. Coal dumped into the well accumulates and is released at intervals into the measuring hopper of the loading machinery and thence passes into the cars.

In the Miller seam a cast-iron drum and 165 ft. of steel wire rope are provided for bringing the trips to the trip feeder. This feeder is capable of handling empty trips not exceeding 130 cars each, advancing them coupled under the gate of the loader at a constant speed of approximately 65 ft. per minute.

The loading apparatus proper consists of the following parts: A steel nose for the bottom of the coal well (this is equipped with a motor-driven gate that opens into the measuring hopper, having a capacity equivalent to one mine car) and second gate, also motor-driven, allowing the coal to drop into the car. The gates are of the chop type and made of steel. They are driven by $7\frac{1}{2}$ hp. variable speed motors ranging from 450 to 1,350 r.p.m. through a gear reduction. All motors operate on 250-volt direct current.



UNDERCUTTING MACHINE AT WORK IN MILLER SEAM

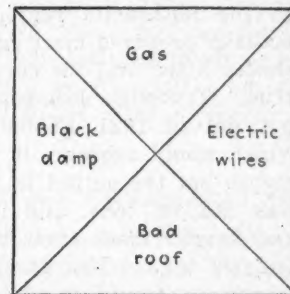
Note the excellent roof which enabled the heading to Rosedale mine to be driven and maintained without a stick of timber or a steel girder.

The control of the loading machinery is entirely automatic. As each car approaches the gate a contact is formed and the lower gate is set in operation. It opens and discharges its contents into the car while the latter is in motion and then closes automatically. As the lower gate closes the upper gate starts its cycle of operation and the hopper is refilled. When the hopper has been filled both gates remain at rest until the next approaching car forms the contact which starts the apparatus in motion again.

With apparatus of this character cars can be loaded with great rapidity, the average rate being six cars per minute. The trip, both empty and loaded, is moved forward by a chain haul of the same general construction as that used for the feeder in the Cement seam but modified in some details. The speed is 80 ft. per minute instead of 65 and the spacing of the hooks is different. This chain haul can handle 130 cars, the grade being 1 per cent and favorable to the load. The average weight of the loaded cars is 5,000 lb. Enough cars are spragged to keep the trip from running forward.

Proposed Danger Sign Divided Diagonally

IN THE report of the thirteenth annual meeting of the Mine Inspectors Institute of America appearing on page 133 of *Coal Age* for July 27 last, the description of the proposed underground danger signal was in error. The recommended signal is intended to be arranged as shown in the accompanying illustration. It will be seen at once that the proposed board is divided by diagonal lines into four quarters—an upper, a lower, a right and a left. This arrangement will be less confusing than that described. Had the drawing here presented been at hand when the description referred to was written no such mistake as was made would have been possible.



THE PERSONNEL OF THE U. S. BUREAU OF MINES CAR No. 2 recently conducted first-aid and mine-rescue training at Dawson, N. M., and at Cameo, Somerset and Gilman, Col. The city firemen at Trinidad, Col., were given a course in first aid. The crew of Car No. 3 has conducted training at Heilwood, Frugality, Fallen Timber, Blandburg and State College, Pa. Car No. 4 was one of the attractions at the King Koal Karnival recently held at Henryetta, Okla., which was attended by approximately 40,000 people. G. T. Powell, of the Evansville (Ind.) safety station, gave first-aid training in June at Seco, Millstone, Blackey, Sassafras, and Wico, Ky. K. H. Chisholm, of the Norton (Va.) station, conducted first-aid training at Moss, Va., for the Clinchfield Coal Corporation and at Roaring Fork and Pardee, Va., for the Blackwood Coal Corporation. First-aid Miner Reid, of the Norton station, conducted first-aid training for the Stonega Coke & Coal Co., at Stonega and Dunbar, Va., and for the Clinchfield Coal Corporation at Crane's Nest and Clinchfield, Va. J. G. Schoning, foreman miner of the Seattle (Wash.) safety station, conducted training at Issaquah, Burnett and Black Diamond, Wash.

"THESE SAFETY GUYS MAKE ME TIRED. It's too much trouble testing out this breathing apparatus."

Well, he didn't care much about breathing any longer, anyway.



BY RAISING 8,218 tons of coal in a single shaft on March 25, 1922, the Orient mine of the Chicago, Wilmington & Franklin Coal Co. established a one-day single-balanced-hoist record that has so far never been beaten. The Zeigler mine of the Bell & Zoller Mining Co. during the same month established the one-month hoist record, producing 164,109 tons, its maximum production in any one day being 7,537 tons.

It will be said doubtless that there are single breakers in the anthracite region that not only handled but actually prepared more coal than the Orient and Zeigler shafts lifted and the surface plants prepared. That is true. Truesdale breaker of the Glen Alden Coal Co. put out in 1921 1,550,014 tons of fresh-mined coal, which would average, it is true, only 129,168 tons per month but the output in the record month of that year was 162,000 tons, and in March, 1922, when Orient and Zeigler made their big record, its production was 202,000 tons. The greatest quantity of coal shipped in one day from Truesdale breaker was 10,314 tons.

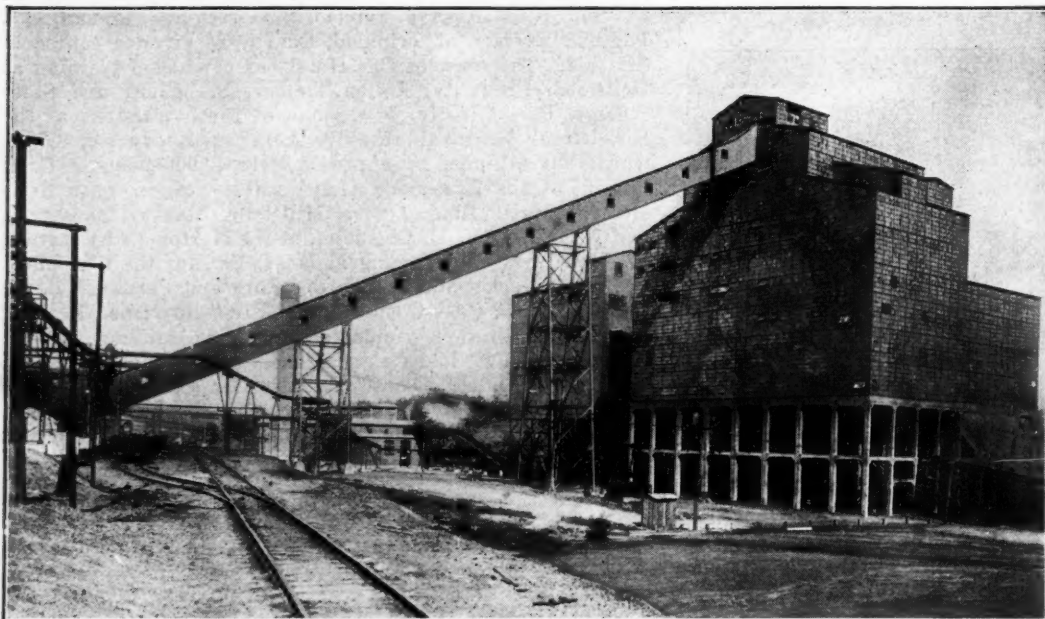
Note—The illustration at the top of the left-hand page shows the Orient and that at the top of the right page the Zeigler mine. These plants are only five miles apart and are located in the Franklin County field, where some of the largest producers in the United States are to be found, that county having been left undeveloped for many years owing to the depth of the coal, not one of the mines in that district being mined by drift or slope.

Conditions Under Which Made Wonderful

**Orient Dumps a Mine Car Every
Three-Eighths Million Tons in One
Production—Output per Man per**

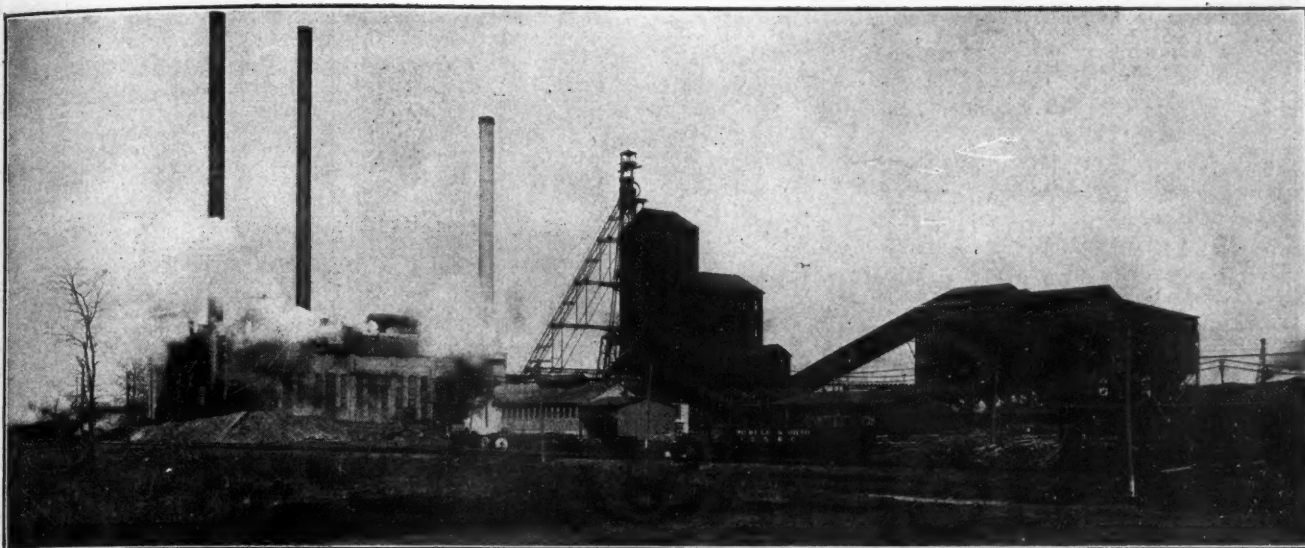
On March 31 of this year the Truesdale plant mined, hoisted and prepared 12,000 tons, of which 9,500 tons were shipped, and 2,500 tons of coal were held for the boiler plant and in pockets for retail trade. Truesdale has been for many years a consistent producer. Since and including 1913 it has not failed once to ship more than a million tons of coal a year. It has no culm banks or strippings to help it maintain its output, but its coal comes from two shafts, five slopes and two tunnels—nine openings in all.

Plymouth No. 5 also, one of the plants of the Hudson Coal Co., commonly known as the Loree colliery, which has five coal shafts, a slope and three tunnels, put out 1,502,071 tons of fresh-mined coal in 1921 and 1,580,000



Truesdale Breaker

A preparator that for nine years has never failed to produce a million tons yearly and has shipped in a single day 10,314 tons. Tributary to the mammoth breaker are two shafts, five slopes and two tunnels. In 1921 1,550,014 tons of fresh-mined coal was produced. On March 31 this plant mined 12,000 tons, but 2,500 tons was held back to keep the mine free of water during the impending strike.



Orient and Zeigler Mines One-Hoist Records

Seventeen Seconds—Loads One and Year—Zeigler Has Biggest Monthly Day Six and Three-Quarter Tons

tons including coal from culm banks. These are plant outputs and are not obtained through the handling of a single shaft hoist.

It is useful, however, to recall the gigantic operations of the anthracite region in sizing up and in considering the importance of the records made in the Orient-Zeigler contest and to realize that the tonnage of each of the Illinois shafts all came to one landing and was hoisted up one shaft by one hoist. There was a concentration not only in regard to time but in regard to facilities of operation. This is really the important fact. We might attain the output of the Orient mine by putting in two plants each of which could produce 4,000 tons and get the result desired—an output of

8,000 tons—but the essential point is that the greater cost of two plants was avoided and that one gang of men produced the whole tonnage.

Still it would not have been a particularly creditable performance if to obtain so much coal through the shaft it was necessary to use an undue number of men. After all, economy of operation is the main consideration. Thus Zeigler produced on its best day about 8.1 tons per man and during the whole month averaged 6.78 tons. The average output per loader per day for the whole month was 11.7 tons and per machine man 95.9 tons, the bottom laborers handling 27.9 tons per man and the top laborers 63.3 tons. These records are exceptionally good.

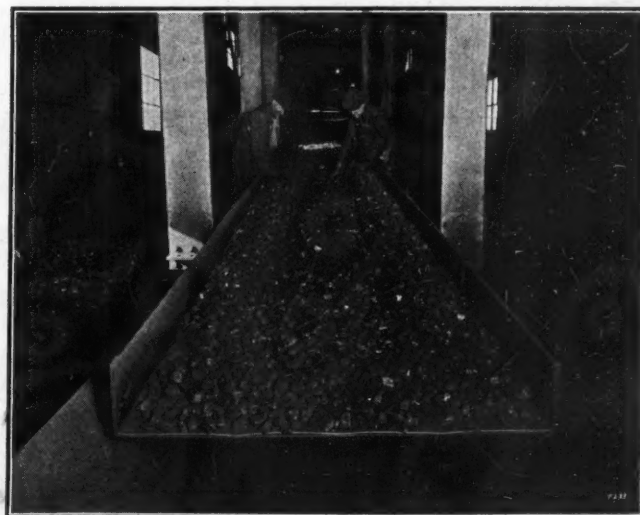
TONNAGE PER MAN EXCEEDS AMERICAN PRACTICE

Is it necessary to call attention to the fact that in the United States the average tonnage per man-shift in whole years, when idle days interspersed among working days made men more anxious to do their best, ran during the period from 1890 to 1918 between 2.56 tons and 3.91 tons and that even in Utah, where coal

TABLE I.—COMPARISON OF ORIENT AND ZEIGLER RECORDS

	Orient	Zeigler
Maximum output per day.....	8,218 tons	7,537 tons
Average output per day in March, 1922....	6,001 tons	6,078 tons
Monthly production (March, 1922)....	162,015 tons	164,109 tons
Lowest tonnage per day.....	5,241 tons	4,103 tons*
Days run.....	27	27
Depth of shaft, collar to bottom.....	520 ft.	417 ft.
Average thickness of coal.....	9 to 10 ft.	11 ft.
Hoisting time on day of maximum production...	468 min.	463
Lost time on day of maximum production...	12 min.	17
Total time on day of maximum production...	480 min.	480 min.
Number of dumps on day of maximum production...	1,640	1,968 at bottom
Dumps per minute.....	3.5	2.1
Capacity of mine cars.....	5 tons	4 tons
Size of skip.....	8 tons
Production in coal year—April, 1921 to April, 1922.....	1,374,985 tons	1,349,610 tons
Average tons per hoist.....	5.0091 tons	8.1 tons
Average time per hoist.....	17.12 sec.†	29.75 sec.
Lower landing to dump.....	600 ft.	517 ft.
Two engineers worked in relays of.....	30 min.	one man
Working relations.....	Union mine	Union mine
Mine opened.....	1912-13	1904
Mine worked by.....	open lights	open lights
Method of operation.....	room-and-pillar‡	room-and-pillar
Size of main shaft.....	11½ x 8 ft.	8 x 12 ft.

* Last day of run. † Allowing 5 seconds for caging, 5 seconds for acceleration and for retardation the maximum rope speed figures 5,070 ft. per minute, or 57.61 miles per hour. ‡ Fifty per cent of coal removed in first mining. Hope to recover 25 per cent on retreat.



CLEANING NUT COAL AT ORIENT MINE

The method of suspending the shaking chute is interesting. Note the evenness of the product. There is a close analogy between the anthracite and Illinois coal shipments, despite the difference in the degree of mineralization of the fuel. The Illinois coals are more carefully prepared than most bituminous coals, the domestic fuel market being fostered with unusual solicitude.



Zeigler Officials

Front row, left to right: Lawrence Hawkins, bottom boss; Joe Dudec, section boss; Paul Johnson, assistant mine manager; Ed Prudent, mine manager; Robert Hart, section boss; Michael McMahon, night boss; Ernest Prudent, machine boss; George Brown, section boss; Richard Prudent, section boss. Rear row, left to right: Paul Weir, chief engineer; E. C. Berger, underground superintendent; R. H. Zoller, general manager and vice-president; Joseph Yerly, top superintendent; Ed. Ferguson, top electrician; Martin Uhrich, company weighman; John Dudash, section boss; Andrew Leslie, top boss.

tonnages per man are unusually high, the output in 1918 was only 4.79 and in 1917, 5.40 tons per man per day.

The showing certainly compares favorably with those that Professor Henry Lewis gives for the British mines in 1921—namely, 177.2 tons per year per person. The men in the Zeigler mine beat that record in a single month of twenty-seven working days.

It must be remembered, however, that the coal in Illinois is not so uneven in thickness, so irregular in level and so wet as in Great Britain. Illinois coal is clean. Several true faults are found in the Orient mine but the displacement is relatively small. The grades in sections run to 5 or 6 per cent and in Zeigler even 8 per cent, but there are stretches of half a mile or more where the seam lies practically level or with only a gentle dip. Regular workings with headings driven in any direction without trouble from water give Illinois an advantage over Great Britain and most of the United States. The southern Illinois mines have not failed to take advantage of the favoring conditions. The operating staffs have with long experience learned to install such equipment as will render the best account of every opportunity. It must also be remembered that the assurance of a strike on and after April 1 made every man paid by the ton anxious to do his utmost so as to obtain the largest possible cash reserve for the long period of idleness which was in view.

The attached tables will give some idea of the relation between the tonnages and the number of men at work at both mines.

TABLE II—OUTPUT AND MEN AT WORK, ZEIGLER NO. 1, IN MARCH, 1922

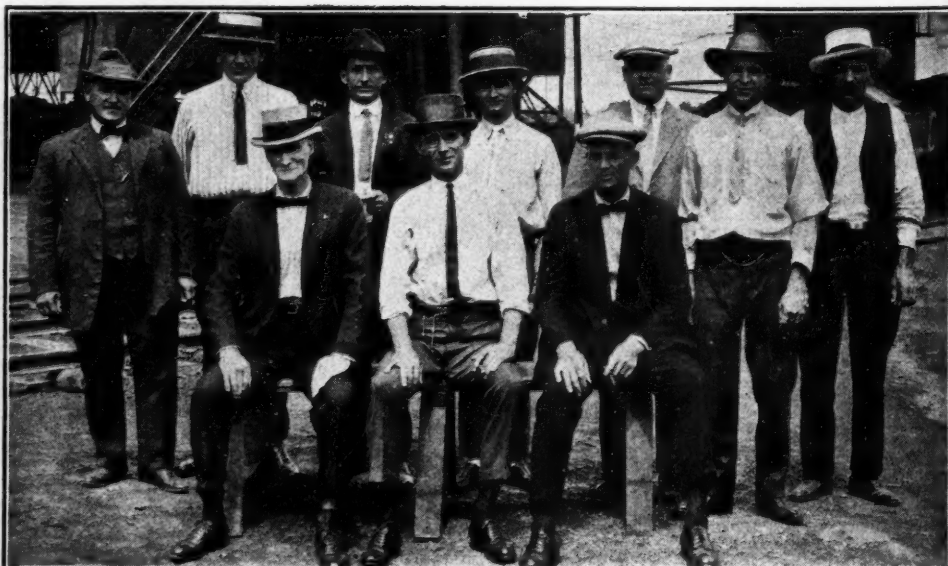
Date	Tonnage	Loaders	Machinemen	Bottom Laborers	Top Laborers
March 1	5,500	462	59	193	96
2	5,415	508	70	222	96
3	6,073	529	70	229	96
4	5,900	531	70	225	96
5	Sunday				
6	5,600	501	62	217	96
7	5,700	546	68	232	96
8	5,900	557	70	236	96
9	7,214	553	69	236	96
10	6,210	551	72	232	96
11	5,780	536	74	224	96
12	Sunday				
13	6,345	530	67	227	96
14	5,992	546	69	234	96
15	6,461	534	66	232	96
16	5,219	427	63	197	96
17	5,748	518	57	222	96
18	6,137	493	67	222	96
19	Sunday				
20	5,734	495	62	205	96
21	5,757	546	66	218	96
22	7,283	529	68	221	96
23	6,734	556	71	222	96
24	6,284	558	69	220	96
25	6,619	548	70	216	96
26	Sunday				
27	6,349	531	63	214	96
28	7,537	547	68	219	96
29	6,268	515	67	206	96
30	6,248	492	32	200	96
31	4,103	336	2	167	96
Totals	164,109	13,980	1,711	5,888	2,592

Days worked, 27; average loaders, 518; average machinemen, 63; average bottom laborers, 218; average top laborers, 96.

At the Zeigler mine it was an easy matter to handle the coal up the shaft because it was provided with two 8-ton skips. Its main difficulty was getting enough coal to the landing. The interesting methods by which this problem was overcome may be found described in *Coal*

Officials at Orient Mine

In front seated, left to right: George Pollack, mine manager; John Rodenbush, superintendent; Peter Borrella, assistant superintendent. In rear, standing, left to right: Joe Spaven, assistant mine foreman; Peter Chlaventone, top foreman; William Nestler, Charles Rodenbush, William Medill, Luther Jones and Jake Rodenbush, assistant mine managers.





MINE BOTTOM AT THE ORIENT MINE

The top landing has been done away with by the automatic self-dumping cage. Unfortunately there is still the bottom caging and decaging to be performed and these are real problems. How speedily and efficiently they were handled at Orient the tonnage tells.

Age, May 25. At the Orient mine the coal is raised in cages and there the difficulty was in vertical rather than in horizontal transportation. Much interest is shown in the relative methods of operation and for this reason the equipment and results at the two mines are tabulated for ready reference.

TABLE III—OUTPUT AND MEN AT WORK, ORIENT NO. 1 IN MARCH, 1922

Date	Tonnage	Total Number Day Men	Loaders	Machine Men	Top Company Men	Underground Company Men	Night Shift	Total
March 1	5,645	935	563	53	81	234	47	982
2	5,773	1,013	623	59	86	244	46	1,059
3	5,797	1,034	635	63	91	245	49	1,083
4	5,843	1,003	615	61	85	241	47	1,050
5 Sunday		51			35	16	25	76
6	5,289	1,012	623	62	89	237	51	1,063
7	5,663	1,052	642	66	91	251	52	1,104
8	5,861	1,023	617	62	96	246	54	1,077
9	6,009	1,045	647	58	89	249	52	1,097
10	5,241	1,056	650	67	89	250	52	1,108
11	5,333	1,045	644	65	90	246	52	1,097
12 Sunday		62			37	25	22	84
13	6,052	1,017	616	55	92	254	42	1,059
14	6,012	1,054	641	63	89	261	49	1,103
15	6,058	1,058	642	55	90	265	48	1,106
16	6,124	969	579	47	93	250	49	1,018
17	6,096	1,018	623	49	95	249	53	1,071
18	6,028	990	603	56	91	240	51	1,041
19 Sunday		97			45	52	32	129
20	6,051	1,014	626	62	89	237	48	1,062
21	6,548	1,065	660	65	88	252	55	1,120
22	6,359	1,049	648	64	93	244	52	1,101
23	5,791	1,053	639	65	88	261	54	1,107
24	5,719	1,064	645	63	93	263	62	1,126
25	8,218	1,065	650	66	92	260	60	1,125
26 Sunday		99			46	53	39	138
27	5,929	1,052	625	63	95	267	48	1,100
28	6,130	1,068	648	58	95	263	50	1,118
29	6,466	1,054	633	56	91	272	50	1,104
30	5,706	1,104	620	39	91	262	47	1,061
31	6,235	859	510	7	92	248	50	909

Total 152,015 28,080 16,867 1,549 2,607 6,937 1,488 29,478

Number of days, 27; average number of day men, 1,040; average loaders, 625; average machine men, 57; average top company men, 97; average underground company men, 257; average night shift, 55; average total, 1,092.

At the Orient mine 825 dumps aggregating 4,100 tons were made in the morning and 815 dumps totalling 4,118 tons were made in the afternoon. Three railroad trains of fifty-eight cars each, or a total of 174 cars, were needed to handle the day's production, the coal being screened into seven sizes over tippie and re-screener.

Thirty-Day Free Storage Given at the New Government Terminals, Mobile, Ala.

BY DAVID HOLT
Mobile, Ala.

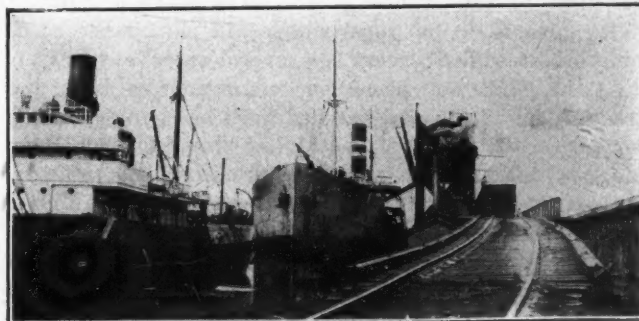
BARGES of rough-hewn lumber first brought Alabama coal to Mobile in the early fifties. This could be done, however, only when the rivers were at high stages. The boats usually were sold with the coal and were broken up for the timber they contained. The bargemen returned by steamboat to Tuscaloosa, and thence traveled overland to their homes in Walker County.

No large quantity of water-borne coal ever moved to this seaport. Frequently the coal and barge were sold at Tuscaloosa to save the long drift down the Warrior, Tombigbee and Mobile Rivers. With the extension of railroads through the coal fields this limited use of the natural waterways for coal transportation gradually came to an end, and it was not until after the canalization of the Warrior River was completed in 1915 that the water traffic in coal was revived. Even then lack of facilities for handling water-borne cargo coal at Mobile retarded development of this commerce.

Floating equipment for bunkering steamers long has been ample for the needs of the port. Such equipment can place fuel aboard a vessel as rapidly as it can be trimmed and stored in the bunkers. The Southern Ry. built a tippie with which to handle coal from cars to ship and the Louisville & Nashville RR. did likewise. Then the government built a coal- and ore-handling plant. This was completed last May and now forms an important link in the Mississippi-Warrior service.

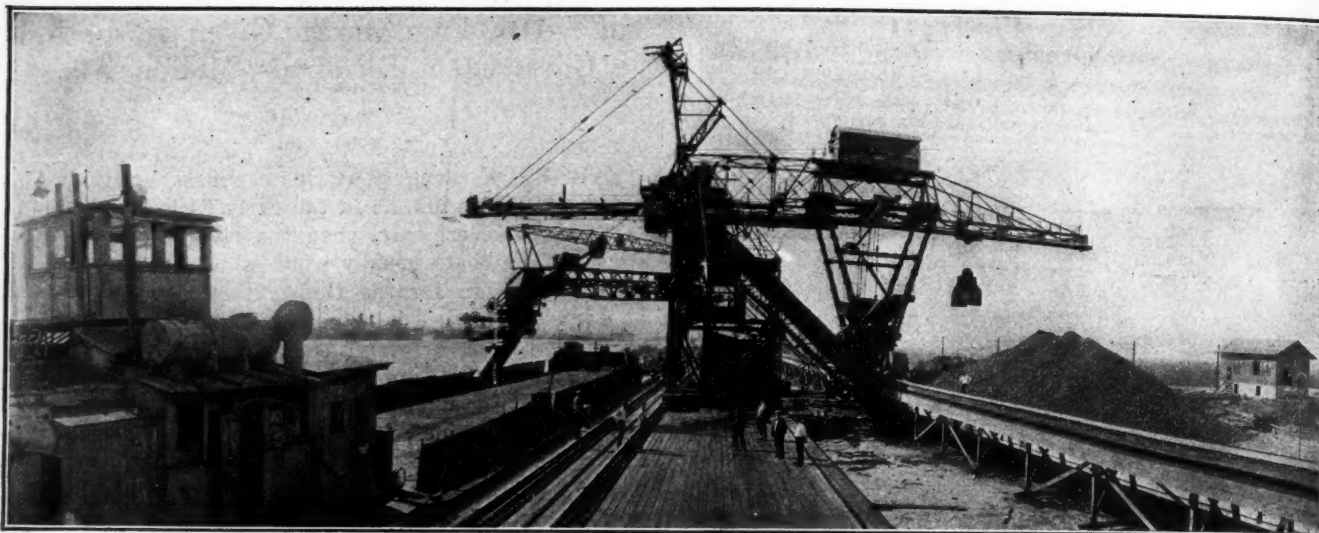
A survey of the port compiled by the Mobile Chamber of Commerce for publication in June, 1922, shows that the present coaling facilities exceed 12,000 tons per day of 8 hr., or more than two average ship cargoes. This equipment includes the government tippie, two railroad tipples, five derrick barges of from 50 to 100 tons hourly loading capacity; one collier capable of placing 150 tons of coal aboard ship per hour, and a locomotive crane designed to transfer coal from barge to ship.

Mobile did not advertise itself as "the cheapest coal port on the Gulf of Mexico" until it was prepared to "deliver the goods." The Mississippi-Warrior service has published and placed in effect its tariff for the delivery and storage of coal at its Mobile plant, which has a capacity of 400 tons per hour from barge or storage pile to ship or other carrier. This publication shows that coal for export or coastwise movement via ocean



DANISH S. S. NORDFARER LOADING COAL FOR PERU

Coal and coke were loaded on this vessel from the Southern Ry. tippie at Mobile, Ala., bound for Callao, Peru. This shipment aggregated 5,000 tons.



COAL AND ORE-HANDLING PLANT AT MOBILE, ALA.

The capacity of the plant is 400 tons per hour from barge or storage pile to ship or other carrier. Delivery can be made from barges or the stockpile to ocean vessels or from barges to the stockpile. Ships trading with the Orient and going to Pacific Coast ports of the United States find in wheat, flour, fresh, dried and canned fruits and fish available return cargoes

vessels, will be handled at the Waterways tipple under the following conditions:

"Delivery will be made direct from barges of the Waterways or from the stock pile into ocean vessels, or from barges to stock pile, the Waterways reserving the right to unload barges immediately upon arrival at Mobile, placing the coal on the stock pile. No charge will be made for delivery of coal into ocean vessels from barges of the Waterways or from stock pile or from barges of the Waterways to stock pile or for storage, provided delivery is completed within 30 days after the arrival of the coal at Mobile. The period of 30 days will be computed from 7 a.m. of the day following the arrival of the barge at Mobile, Ala., Sundays and holidays excepted.

FIFTEEN CENTS PER TON AFTER THIRTY DAYS

"If delivery is made, or if coal is held in storage after the expiration of the 30-day period a charge of 15c. per ton of 2,000 lb. will be assessed. This charge includes the transference of coal from barge to stock pile, from stock pile to vessel, or from barge to vessel, as well as storage at the tipple. This charge must be paid immediately upon the expiration of the 30-day period referred to in the preceding paragraph."

Under present regulations, no coal will be handled at the tipple by the Waterways except in line service. No railway connects with the plant, which is located on the east side of the Mobile River. The storage capacity of the bins is 40,000 tons, which will permit the accumulation of sufficient coal for several ships' cargoes.

As the plant was placed in commission in June, the greater part of the coal handled by it has gone to Texas ports by ocean barges. One Mobile shipping firm, Page & Jones, has handled four cargoes of coal and coke, or approximately 24,000 tons, from the port of Mobile within as many months. Further exportations are anticipated in the near future. The greater part of the cargo coal handled was loaded at the railroad tipples and all of it came to the port by rail. The latest shipment, composed of about 5,000 tons of coke and coal, was made to Callao, Peru, on the Danish S.S. "Nordfarer." This is said to be the beginning of a large

movement of Alabama coal and coke to that Peruvian port.

Shipment of pig-iron, iron pipe, steel rails and other manufactured products of the Birmingham district to the Orient and to Pacific coast ports of the United States, via Mobile and the Panama Canal, with return cargoes of wheat, flour, fresh, dried and canned fruits and canned fish, has shown a marked increase during the present year. It is not an uncommon occurrence on the Mobile water front to see a steamer taking metal products from cars on one side and steel rails from Warrior barges on the other. The distribution of freights brought in by these steamers inbound gives the Warrior barges the return cargo that is needed for the successful operation of the line.

The commerce of the port of Mobile is in a flourishing condition and will be further improved after the passage of the proposed Seaport Amendment on which a vote will be taken on Nov. 14, the purpose of which enactment is to permit the State of Alabama to lend \$10,000 on its credit for the further improvement of the seaport, by the building of self-supporting terminals, to be owned and controlled by the state, through its harbor commission.

Telegraphic advices from Alaska are to the effect that the Naval Collier Jason is en route south from Alaska with 5,000 tons of washed coal from the Chickaloon mine and 600 tons from the mines of the Behring River Coal Co. This coal is to be given a battleship test. An ingenious application of gold-mine practice has been resorted to in washing the Behring River coal. Gold sluices have been put in for this purpose and are giving splendid results. They are built in parallel, so that while one is being cleaned the other is in service. The plan is so effective that even the fine coal which settles in the bins shows no more than 4 per cent ash. Much of the coal thus far mined has run only 2 per cent in ash. The coal is sacked at the foot of the sluice and there transferred by truck to a canoe landing four and one-half miles away.

"CAP CRIMPERS ARE TOYS FOR KIDS. I'll use my teeth."
He did. But he has no use for them now.

"THIS MUST BE A MISSED SHOT. I'll dig in and find out."
Wham!

Laws Compelling Use of Telephones at Mines and Provisions that Make Them Safe and Durable*

Several States Provide for Their Compulsory Installation—Severe Conditions Imposed Require Specially Constructed Devices—Reliable Transmission and Signaling, Prevention of Burn-outs, and Safety to Users Essential

BY D. E. A. CHARLTON†

AT A mine not a shift passes in which the usefulness of the telephone fails to be made manifest, and it hardly seems necessary in these days of enlightenment to enact laws making the use of the telephone in mines compulsory.

In June, 1921, the U. S. Bureau of Mines issued‡ a compilation of state safety regulations pertaining to the use of telephones at mines prepared by L. C. Ilsley and R. A. Kearns. This shows that sixteen states have rules or enactments relating to telephones, and I understand§ that no new state regulations have been enacted since then, although changes may take place at any time. It is of interest that the Federal Leasing Act of Feb. 25, 1920, has the following reference to mine telephones: In each mine where more than 100 men are employed underground on any shift the lessee shall provide and maintain a telephone system between the hoisting-engine room, the ground landing of the shaft or slope, the principal mine exit of drift mines, the fan building when same is located 1,000 ft. or more from the power house or main exit of the mine, and such other points on the surface as the safety of the employees may dictate. The telephone system shall also extend into the mine and telephones be placed on each shaft or slope landing in use and at the inside siding of each of the main haulage roads. The underground telephones shall be so placed that no body of twenty men shall be more than 1,000 ft. from the nearest telephone station. Telephones shall also be placed in each refuge and first-aid chamber.

WHAT LAWS OF THE SEVERAL STATES REQUIRE

The following is a résumé of the various state regulations with regard to the use of telephones at mines: The rules of California provide that telephones be maintained in all mines over 500 ft. in depth. Colorado orders the maintenance of an adequate telephone system in all mines, extending from the surface to the bottom of the shaft. Illinois requires that a system of party-line telephones be installed that shall include one telephone at the bottom of the hoisting shaft or, in slope or drift mines, at the first cross entry, and one at each inside parting. Iowa demands that in all mines where the workings extend more than 3,000 ft. from the foot of the slope, shaft, or the mouth of the drift a telephone system shall be installed and that this shall be extended as the works of the mine progress 3,000 ft. therefrom. Kentucky specifies that in any coal mine where more than fifty men are employed underground, one or more telephones shall be installed communicating with the

surface. In Kansas it is unlawful to operate or permit any coal mine to be operated not equipped with a party-line telephone system. The New Mexico law apparently exempts metal mines, for it is stated that it shall be the duty of the operator to install and maintain a telephone system in every coal mine. The North Dakota legislation also relates to coal, and specifies that in any coal mine where more than fifty men are employed underground, one or more telephones shall be installed. The Oklahoma laws provide that a telephone system shall be furnished in every coal mine where as many as fifteen men are working.

PENNSYLVANIA, TENNESSEE, UTAH AND WYOMING

In the anthracite mines of Pennsylvania means of communication must be provided by telegraph or telephone between mines and collieries, and in the bituminous region of that state the law relates more specifically to communication between the surface and the bottom of the shaft or slope. Tennessee specifies the maintenance of a metal tube from top to bottom of shaft, or a telephone system. Texas also requires that a metal tube or telephone be maintained. The Utah laws provide that in all mines in which ten or more men are working more than 2,000 ft. from the entrance, or in which there are ten or more working places more than 2,000 ft. from the entrance, an underground telephone system shall be installed. Washington specifies that a telephone or metal tube shall be maintained from the top to the bottom of every shaft or slope, and at each alternate working level. Wyoming orders that a system of party-line telephones be provided at each coal mine in operation. In addition, several of the regulations of the various states contain clauses relating to the installation and maintenance of mine telephones.

The severe conditions to which mine telephones are exposed make it necessary to construct them more ruggedly than is necessary in ordinary installations. Underground, the device frequently must be exposed to moisture, gases, acid water, and mechanical sources of injury. Of these, the last, which include falls of ground, blasting concussions and rough handling, are the most frequent; moisture is probably the next. Gas and acid water are in general restricted to coal and copper mines.

Mine telephones are in general housed in a moisture- and rust-proof iron or steel case, of sufficient thickness to provide ample protection from injury. The edges of the case are well rounded, so that water and falling objects will easily slide off, and strong mounting supports are provided to insure rigidity when the telephone is installed. An outer door on the case, provided with a rubber gasket, serves, when closed, completely to protect the mechanism from any disturbing elements.

*A paper presented before the Mining Section of the National Safety Council, Detroit, Mich., Aug. 28 to Sept. 1, 1922. This article was presented under the title "The Use of Telephones in Mines."

†Managing Editor, *Engineering and Mining Journal-Press*.

‡"Reports of Investigations," June, 1921, Serial No. 2,258.

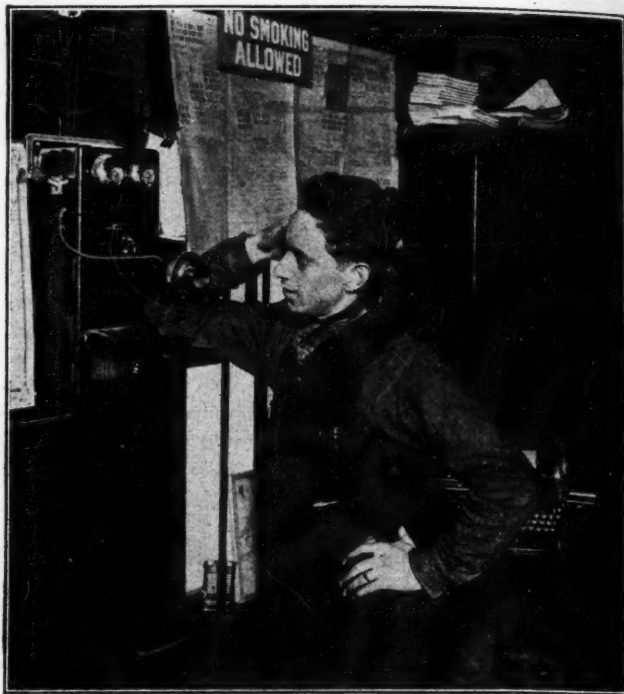
§Personal communication.

When this is opened, only the transmitter, receiver, receiver cord, and generator handle are exposed, as an inner door effectually conceals and protects all of the delicate mechanism of the telephone. When necessary, locks or padlocks may be placed on the outer door, the shift bosses or foremen being provided with keys. Binding posts for the line and ground wires are placed in a terminal box, which is either mounted on the underside of the case proper or included as a part of it. The bells, bell mounting, and clapper rod assembly are housed in a dome-shaped casting on the top of the case.

The talking apparatus of the mine telephone consists of a standard long-distance transmitter and receiver, slightly modified for underground service. In the design of these the manufacturers have considered carefully the hard usage to which the mechanism will be subject, and waterproof windings and special insulation are used throughout. The ordinary form of gravity-controlled hook switch is not sufficiently rugged for mine service, and one manufacturer, at least, has devised a positive spring-controlled hook switch in which the force of gravity is not employed. The receiver, instead of being suspended from a lever which terminates in a fork-shaped yoke, normally rests between the jaws of a special holder. When the receiver is taken out of the jaws a trigger depresses a small plunger which passes through the door and actuates the contact spring of the hook switch.

Mine telephones are usually supplied with ringers of 1,600 or 2,500 ohms resistance and five-bar hand generators. Under average service two standard dry cells will furnish talking current for a year or more, as the transmitter has a fairly high resistance and therefore a low current consumption.

Frequently it is desirable to supply loud-ringing extension bells so that the telephone signals may be heard at some distance or above the noise in that par-



MINE CLERK CHECKS UP UNDERGROUND DATA

In a surface plant it is easy to run out and talk over difficult matters with the foreman, but in a mine plant without underground telephones one may often wait till evening to discuss matters and then the foreman may not come to the office. When a job is started and is delayed for lack of information the telephone furnishes a way of speeding the work to conclusion.

ticular place, which may be a shaft station or a pump room. In this event gongs of 6- to 8-in. diameter are supplied, the ringer coils usually having the same resistance as those used in the telephones.

It is customary to protect mine telephones against lightning discharge and accidental crossing with high-tension lighting or power circuits, and for this purpose a protector, consisting of mountings equipped with fuses and carbon-block type open-space cutouts, is used.

LARGE CHOICE OF TELEPHONE CONDUCTORS

Conductors of many kinds may be used for mine telephone lines, and many different types of brackets and insulators are available. No one type of installation can be recommended for all conditions. The following kinds of conductors are in general use for wiring mine telephone systems:

Surface: Triple braid weatherproof copper or iron wire (No. 12 gage); bare copper or iron wire; bridle or drop wire for short runs.

Underground: Practice greatly differs as to sizes and types of wire used underground. One manufacturer recommends armored cable, Ferrin cable, or twisted-pair drop wire (40-per cent para insulation). From a questionnaire which I sent out the replies varied greatly, but in general Nos. 12, 14 and 16 copper wire, rubber-covered and armored, also No. 12 iron wire, tinned, were specified. In some instances, the wires down the shaft are included with the signaling wires, the whole consisting of a single cable with individual strands for the two functions. Where conduits were used, 1-in. metallic carriers were specified.

Not infrequently much trouble is experienced from the breaking of the line by falls of roof and similar happenings. In the installation of wires, particularly in haulage drifts where trolley locomotives are used, it is essential that care be taken in the placing of wires



TELEPHONES INCREASE SAFETY AND EFFICIENCY

The mine foreman below ground is the more disposed to make his rounds because he can remain in touch with the surface through the telephone and can direct affairs through his lieutenants at the tipples and partings. This makes a telephone an instrument of efficiency as well as safety.

so that there shall be no connection between the two circuits. Unless the telephone wire be well insulated, a wooden or insulated conduit should be provided where it crosses over trolley wires.

The location of mine telephones depends of course upon the extent of the operations. Not infrequently a group of mines will be connected from a central switch-board which will serve all important points above and below ground. In most installations, however, it is customary to maintain a single circuit at each mine, connecting the surface with the underground workings and signaling to the different stations by means of code rings. The following buildings will usually be included in such a circuit. For metal mines (surface): Office, engine room, boiler room, shops, change house, first-aid room, and top of shaft; (underground): shaft stations, pump stations, powder magazines, loading pockets, and transmitting levels. For coal mines (surface): Office, engine room, shops, tippie, top of shaft or slope, and first-aid room; (underground): shaft or slope bottom, pump stations, main partings and first-aid rooms.

In a tentative draft* prepared by the U. S. Bureau of Mines the following general requirements have been stated to be used as a basis in establishing a list of telephones which would be permissible for installation in gaseous mines:

WHAT A PERMISSIBLE TELEPHONE SHOULD EMBODY

The apparatus shall be so designed and constructed that under no circumstances can its normal operation cause ignition of surrounding explosive mine atmospheres. All parts of the apparatus shall be adequate for the service for which they are intended.

The construction of permissible apparatus shall be especially durable. This requirement shall be applied consistently to all the details of the apparatus under test in order that with proper care and maintenance the permissible qualities of the apparatus will remain unimpaired under the severe conditions imposed by mining service.

All terminals and contacts, and all wiring, shall be adequately protected, and all leads shall pass through the casings of the apparatus by means of adequately insulated devices of approved design.

All parts of the apparatus, such as the magneto, the hook switch, etc., which are capable during normal operation of igniting explosive gas and air mixtures, shall be placed in permissible compartments.

All openings in the casings of permissible compartments shall be tightly closed and it is desirable that such openings shall be as few as possible. All joints in the casings of a permissible compartment shall be metal-to-metal, so designed as to form a path not less than 1 in. long from the inside of the casing to the atmosphere. All bolt holes in the casing shall be bottomed or so arranged that the accidental omission of a bolt will not give an opening through the casing. The compartment shall be provided with an adequate lock or seal to prevent any person from tampering with the apparatus inside the casing.

Battery cells shall be placed in a permissible, or in a locked or sealed adequate compartment, and their terminals and the connections thereto shall be arranged so as to preclude the possibility of anyone meddling or tampering, or making electrical connection with them. The short-circuit current of the battery measured as close as possible to the terminals shall not exceed the following limits: For batteries giving 2.5 volts or less, 100 amperes; for batteries giving 2.5 volts but not more than 4 volts, 85 amperes; for batteries giving more than 5 volts but not more than 6 volts, 45 amperes.

The manufacturer shall permanently attach to the case

*Tentative Draft, Schedule 9A, Bureau of Mines, "Procedure for Establishing a List of Permissible Telephones for Use in Gaseous Mines; Character of Tests, etc."

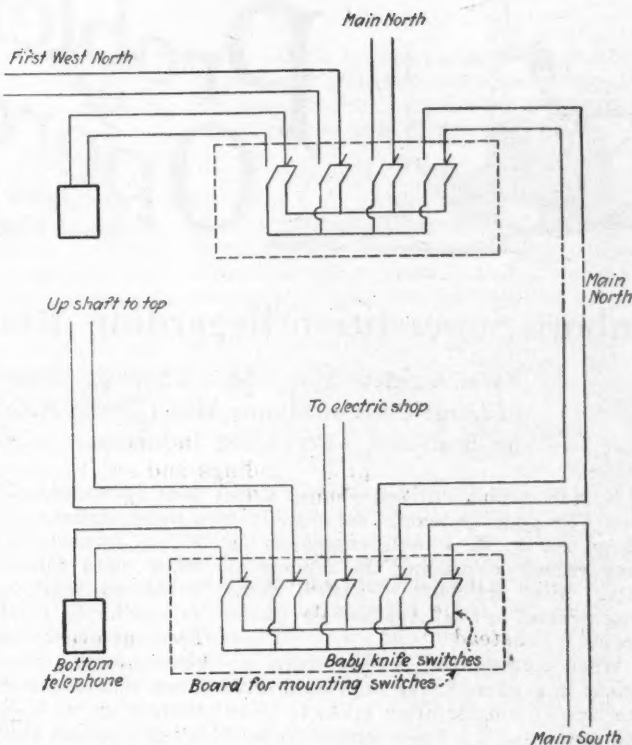


DIAGRAM OF TELEPHONE SWITCHES IN A COAL MINE

This installation would be greatly extended in mines having many ramifying workings.

of the apparatus adequate instructions for the installation and connection of the telephone, so that the safety and efficiency of the apparatus and the system to which it is connected shall not be diminished by its installation. He shall also attach to the instrument an adequate wiring diagram of the apparatus.

Correct wiring and proper installation and maintenance, combined with sensible usage, are essential to the success of mine telephone systems. The telephone is a prime necessity in every mine, for without it today safety and efficiency are impossible.

In the preparation of this paper I am indebted to L. C. Ilsley, electrical engineer of the U. S. Bureau of Mines; the Stromberg-Carlson Telephone Manufacturing Co., the Western Electric Co., and to the several safety engineers and superintendents who have given me specific information concerning telephone installations and various other details of practical operation at their mines.

J. J. RUTLEDGE, superintendent of the Central District experiment station of the U. S. Bureau of Mines, Urbana, Ill., is devoting much time to the study of improved methods of underground work in coal mining which result in increased recovery of coal. Mr. Rutledge recently conferred with operators of Iowa mines regarding a method in use there which recovers 90 per cent of the coal in the bed when conditions will permit its use.

NUMEROUS TESTS HAVE BEEN MADE at the experimental mine of the U. S. Bureau of Mines near Pittsburgh, Pa., to determine the resistance offered to given quantities of air by placing mine cars in different sections of the air passageway, including timbered sections with timber sets spaced respectively at 5-ft. and 10-ft. centers. Tests were made to determine the equivalent straight-entry lengths corresponding to a right angle turn, respectively without vanes, with one vane, with two vanes, and with two vanes and a Venturi vane. A program of 30 tests was completed in July.



Problems of Operating Men

Edited by
James T. Beard



Inborn Superstition Regarding Mine Accidents

Fatal Accident Starts Men Thinking—Superstition of Large Class of Mining Men—Death Rate Shown by Statistics—Prevailing Indifference of Workers

IN HIS article entitled "Importance of Checking System," *Coal Age*, July 20, p. 96, J. W. Powell expresses his deep regret on reading the reports of fatal mine accidents recorded, from time to time, in *Coal Age* and the public press.

When investigating a recent fatal accident in a mine, I was impressed with the lack of consideration given to these sad occurrences. There seems to be a widely prevailing feeling that accidents will happen in coal mines, in spite of all that can be done to eliminate them.

A remark commonly made is, "When a man takes a job in a mine he assumes his own risk," and Providence only knows how great is that risk. Such an attitude on the part of the worker, it must be acknowledged, does not tend to lessen casualties.

My visit to the mine just mentioned has started me thinking. The foreman spoke of this accident as "Number one," adding, "We will sure have two more soon." He said that, in all his experience, he had never known it to fail; but when one accident occurred two more were sure to follow.

This philosophy, I have learned, is inborn in a large class of mine workers and mining men in general. It is a superstition that pervades their minds. Many mine workers have come to look on an accident as something mysterious and beyond the comprehension of mortal man. The idea relieves the worker of his own personal responsibility in the matter.

ESTIMATED ACCIDENT RATE IN ALL INDUSTRIES

It is said that industry is responsible for a death every fourth minute and an accident every fourth second. This estimate, I believe, is based on five 9-hr. working days in a week, and embraces all lines of industry, including coal mining.

In a general way, we know that accidents are common—so common that we pass over the record of minor accidents with little special thought. It takes some serious accident, or a great disaster, to awaken our minds to the responsibilities that are ours.

Workmen in a neighboring plant rarely know of an accident in one adjoining and, beyond a small circle of friends and neighbors, the incident

goes unheeded. There is not the community interest that the occurrence should awaken in the hope of making labor more safe.

Instead, what do we find? A serious or, perhaps, fatal accident occurring awakens nearby workers to a sense of their danger. For a time they are more alert and cautious. But the sense of danger grows less, as time passes, and when a second accident occurs many are hardened and the effect is far less than on the first occurrence.

Again, time passes and a third accident occurs. Then the old indifferent manner of performing their work returns. With evident relief a worker exclaims, "Well, that is Number three. We are safe now, for a while, anyway."

IMPORTANCE OF INVESTIGATION

It is my belief that this attitude of mine workers, call it superstition if you will, is responsible for the great indifference displayed by the average miner, regarding his own personal safety. It explains why an accident out of the ordinary is required to bring men to a realization of the hazards about them and make them, for a time, more careful about their work.

Reflections such as these should bring to our mind the fact that there is much need for improvement in this direction. The proper way to approach the matter is to make every fatal accident the subject of a thorough and immediate investigation. It is important that this should not be delayed, or the impression to be made on the minds of the men will be lost.

At once, on the occurrence of an accident in or about a mine, the superintendent or mine foreman should appoint a committee of three to make a thorough and careful investigation and report the facts to him for submission to the highest official in charge. Throughout the investigation, the aim should be to fix the blame for the occurrence on any one found to have neglected a duty, and make recommendations to avoid a similar occurrence.

The investigation made by the committee, in addition to those made by the state mine inspector and the coroner if the accident is fatal, should make a deep impression on every one connected with the undertaking.

In other words, every one should be made to feel that an accident, be it small or great, serious or otherwise, is not a thing to be passed over carelessly or lightly set aside. Cause for the occurrence must be found and the responsibility placed on the shoulders where it belongs. Bulletins and pictures strongly emphasizing the fact make a lasting impression on the mind.

GEORGE EDWARDS.

Pikeville, Ky.

The Certificate and Safety

The mine symbolized as a ship—Mine officials are the captain and officers of the ship—Knowledge required to insure safety—Responsibilities of the fireboss.

PERMIT me to offer a few words in addition to what has already been said regarding the employment of certificated men in responsible positions in coal mines. Arguments have been advanced on both sides of the question, but it stands to reason that a certificate of competency honestly gained is an evidence of the holder's intelligence and acquaintance with the principles of mining.

Without doubt, we have many good men who have gained experience through long years of practice and, yet, it cannot be denied that some of these are dangerous men to be given charge of a mine where the conditions require a knowledge that cannot be gained through practical experience alone.

MUST KNOW MORE THAN PRACTICE

Consider for a moment a foreman given charge of a very gaseous mine where the coal is highly inflammable and makes much dust. His previous experience does not guarantee that he will be able to handle successfully the problems that will arise under these conditions. He must have a knowledge of the nature and behavior of gases beyond what practice has taught him.

What is true of the foreman is true, to an even greater extent, of the fireboss in whose hands are placed the health and safety of the men employed in such a mine. Like the foreman, his knowledge must be greater than what one can learn in the practice of firebossing alone.

Let me liken the mine to a great ship voyaging the ocean. The miners and daymen are the passengers and the mine officials, from the superintendent down, are the captain and officers, to whom are entrusted the safety of the ship and its precious burden.

Will anyone question the statement that the officers in charge of a ship must have a thorough knowledge of the principles involved in their calling. It is just as true that all mine officials must possess the same thorough knowledge of the principles of mining, in order to cope successfully with the dangers incident thereto.

Today, the mining student requires a more extensive knowledge of many of the appliances than was necessary in the earlier history of the coal industry. As manager, superintendent, foreman or fireboss, the man must deal with matters that come under his notice and direction and which call for a working knowledge of all appliances. In this regard, we are more fortunate than our forefathers in having the means at our disposal for securing an efficient education, which is within the reach of all.

In respect to the safety of the mine and the men employed, the fireboss has the most responsible position. He it is who O.K.'s the board, telling them the mine is safe for work; it is his word that sets the wheels of the mine in motion.

BRUSHING THE GAS DANGEROUS

Strange as it may seem, many of our so-called "safety inspectors" and a few firebosses insist on brushing the gas that they may find in a place, using their coats as a fan for that purpose. They do not seem to realize that gas, disturbed in this manner, will return shortly and before the men reach their places for work.

Brushing the gas in the manner mentioned, is a dangerous practice. No man with an education would do this. Instead, he will see that sufficient air is conducted to the face and made to sweep the place where the gas is accumulated, in volume sufficient to dilute and render harmless the gas.

Another danger requiring a higher knowledge than that gained in practice is the dust menace in mines. Where the fine dust of an inflammable coal is allowed to accumulate on the timbers, roof and sides of the roads and air-courses, or in the working places, it is extremely dangerous. It becomes the prime factor in propagating an explosion throughout the mine that would, but for the dust, have had only a local effect.

MINE OFFICIALS REQUIRE KNOWLEDGE GAINED ONLY BY STUDY

The study of appliances to which I have referred gives both the mine foreman and the fireboss a knowledge of the dangers present, and enables them to avoid all conditions that make the mine unsafe. It is up to every mine official to gain this knowledge in addition to his practical experience.

Let me say, in closing, that I am of the opinion that there has been and still exists a close relation between the certificate of competency and mine safety, which every man should recognize. The holder of a certificate should be em-

ployed, in any official capacity, in preference to a man who holds no certificate, provided both are practical experienced men.

The certification of mine officials raises the standard of excellence, giving to every such man a knowledge of gases, ventilation, pumping, drainage, timbering and other subjects, including the geology of the coal formations that makes him familiar with the economics of mining. Such a man will be better able to understand the cost-sheet and reduce the accident list and insurance.

In the last examination, in Kentucky, out of 126 applicants, 114 passed a successful examination and gave evidence of their practical intelligence.

L. BLENKENSOPP,
Chief Inspector of Mines.
Lexington, Ky.

Heating of Gob Areas

REFERRING to the question of the heating of the gob, as the result of mining a seam, in a clay parting containing sulphur, allow me to give a little of my own experience in keeping the waste cool under similar conditions.

In the first place, let me say the mine should be well ventilated. From the conditions described, in this case, there is little doubt but that much fine coal is mixed with the clay cuttings thrown back in the gob and every opportunity is afforded for heating to develop that will cause trouble and should be prevented.

USE OF SALT IN BLASTING ADVOCATED TO REDUCE HEATING

In the reply to this inquiry, mention has been made of the use of salt, as a means of counteracting the tendency to combustion in the waste. This, to my mind, is a good plan; but let me suggest that, before the machine is brought into the face for the purpose of cutting, a layer of salt should be sprinkled broadcast on the bottom rock along the face.

By so doing, there will result a more intimate mixture of salt with the clay cuttings and fine coal. Then, before throwing this refuse into the waste, it should be again sprinkled with salt. Indeed, the salt should be used without restraint if it is to prove effective.

Again, when throwing the refuse into the waste it should be distributed in thin layers and not piled in heaps, in order to reduce the tendency to heating, by giving the air current a better opportunity to carry away the heat as it is generated. Also, the gob should never be piled against the coal rib, which should be kept clear and free. This will also prove an advantage by giving cleaner coal when removing the pillars.

Wilder, Tenn.

OSCAR H. JONES.

AS HAS already been suggested, the best way to eliminate the trouble caused by the heating of gob, in the longwall-advancing method of mining, under the conditions described by "Mining Engineer," in *Coal Age*, May

25, p. 886, is to load out the clay cuttings mixed with fine coal and containing some sulphur. This should not be stored in the gob if trouble is to be avoided.

The suggestion of the use of salt, in an attempt to reduce the tendency of the gob to heat is, in my opinion, well worth trying. We are taught that coal absorbs anywhere from 1½ to 3 times its volume of oxygen and the resulting oxidation of the hydrocarbons in the coal develops heat, which if allowed to proceed will eventually fire the coal left in the waste.

EXCLUDING AIR FROM THE GOAVES PRACTICE IN ENGLAND

My method for preventing this action is to exclude the air from the goaf, as far as that is practicable. The goaf, in longwall working, should be stored as closely as possible and confined by well-built packwalls. The building of these packwalls, shutting in the goaf and excluding the air, is a matter of great importance in longwall advancing, under the conditions named. In some districts in England, the coal seams are subject to gob fires; and it is the custom, there, to build the packs, along the roads or "gates," as they are called, very solid so that they are impervious to air.

At times, these packwalls are made of blocks of clay 9x9x18 in., in size, sent down from the surface into the mine, and these are built up as walls on each side of the gateroad. The result is that little air can reach the goaves, except at the working face; and, at times, such a wall is built across the face when it becomes necessary to seal off the area because of a fire started in the gob.

WILLIAM DICKINSON.

Lochgelly, W. Va.

Some Facts in Coal Mining

Higher accident rate among American miners—Employed in more dangerous work—Causes of waste of coal and material.

IN HIS address before the Clarksburg Mining Institute, a short while ago, R. M. Lambie, chief of the Department of Mines of West Virginia, made one or two statements to which it will be well to refer by way of explanation.

As reported in *Coal Age*, May 18, p. 825, Mr. Lambie is said to have remarked that "the percentage of accidents in coal mines is greater among Americans than among foreigners, claiming that in 1921 there was one fatality for every 342 American miners employed, while the rate among Hungarians in the mine was one for every 645 miners.

This statement is anything but flattering to the American miner, unless the reason for its truth is explained. The speaker went on to say that Negroes, Italians and Spaniards were among the most careful men in avoiding accidents.

A simple statement giving the ratio of fatalities for so many persons employed, it will be generally agreed, is

no criterion by which to judge miners of different nationalities, in respect to their relative freedom from accident.

It is well known that the American miner is called on to perform the most dangerous work, in the mine, more often than falls to the lot of a foreign miner. From the very nature of the case, as a class, foreign miners are employed on the less hazardous kinds of work. Few of this class of miners are to be found drawing pillars, timbering high falls and doing other dangerous work.

In one mine where I was recently employed, of the 200 men engaged in loading the coal cut by machines, only 20, or 10 per cent, were Americans and most of these were so employed only temporarily, because of a lack of pillarwork and other more hazardous undertakings.

In the same mine, from 75 to 80 per cent of the men employed in the pillar workings were American miners. It is clear from such illustrations as this, that any ratio of fatalities to the number of men employed has no national significance and must be unfair to American miners to whose lot it falls to perform the more hazardous work.

WASTE OF MATERIAL DUE TO LARGE AREAS TO BE INSPECTED

In the course of his address, Mr. Lambie referred to the deplorable waste of both coal and material manifest in a large number of mines. Unquestionably, this is true, but the responsibility for the same is to be attributed more to the fact that underground officials are given, generally, more territory to supervise than these men can look after efficiently.

Much of the waste can undoubtedly be avoided by giving each foreman and assistant foreman less territory, so that he will be able to visit each working place several times a day, instead of having to hurry around in order to visit every man once a day.

More frequent inspection of the working places would have the advantage that the foreman or assistant foreman would be able to see that his orders, given on a previous round, were obeyed and not put over till the next day with the chance that, in the meantime, accident would befall the man.

LARGE AMOUNT OF COAL LOST IN CRUSHING OF PILLARS

The largest loss of coal occurs in places where the pillars are so badly crushed that work on them is too dangerous and must be abandoned. This condition often results from pillars being left standing for an indefinite period; or because of a haphazard system of working, in respect to driving the rooms and drawing back the pillars.

For example, where the line of pillarwork is to parallel the entry, a sufficient number of rooms should be driven up together and, on reaching the limit or boundary, the pillars between them must then be drawn back together. On the other hand, if the rooms are turned in regular order, one after another, the work should be so arranged that they

will reach the limit or boundary in regular order and the line of pillarwork should then be kept straight and make an angle of about 45 deg. with the entry.

Any delay, either in driving the rooms forward, or pulling back the pillars in regular order, will throw an ex-

cessive load on those rooms or pillars that are delayed. This will cause the roof to cave in the rooms and pillars will be crushed. Proper attention to these matters will avoid a very large waste of coal in our mines.

THOMAS ALLEN,
Mt. Harris, Colo. Safety Instructor.

Inquiries Of General Interest

Estimating Calorific Value of Mine Feeder Gas

Heating Value of Any Combustible Depends on Its
Composition—Heat of Combustion Calculated From
Chemical Reaction—Composition of Feeder Gas Variable

RECENTLY my thoughts have dwelt much on the great loss we permit in allowing large volumes of feeder gas to escape into the atmosphere, without making any attempt to utilize its heating value. I believe attention has been drawn to this matter, at different times, in the columns of *Coal Age* and other mining publications.

Lately, the subject has impressed itself strongly on my mind, in connection with the draining of gas from abandoned panels and other large areas that have been sealed off in mines. The gases generated in these areas have been drained to the surface through boreholes sunk for that purpose.

Now, why would it not pay to conduct this gas, by pipes, to the boilerhouse and burn it under the boilers. There may be practical reasons why this cannot be done; but it seems to me that the saving of the heating value of these waste gases would more than compensate for the expense of installing the necessary piping system.

If there are objections to introducing the gas under the boilers, could it not, at least, be conducted to the main flue or base of the stack where it would be ignited and create a motive column that would increase the draft in the stack? Such an arrangement would also greatly assist the drainage of gas from the sealed portions in the mine. I have often thought that allowing these gases to go to waste, when they could be reclaimed at a small cost, is an unwarranted neglect that waits to be remedied.

In this connection, allow me to ask, what may be assumed to be the calorific value of the gases coming from the drillholes that drain large abandoned and sealed areas or panels in mines; and how is this heating value of the gas calculated? Information on this subject will be interesting and I believe of much practical value to all engaged in the operation of coal mines.

Linton, Ind. W. H. LUXTON.

As stated by this correspondent, attention has frequently been drawn in

these columns to the fact that the waste gases, in the mining of coal, have a heating value that might well be utilized in the production of power and thereby effect a considerable saving in fuel. In the Pittsburgh district and elsewhere, feeder gas issuing from boreholes sunk from the surface, has been largely utilized for the purpose of heating.

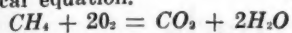
There is no question but that much heat goes to waste when this gas is permitted to escape into the atmosphere and is lost. The illuminating quality of feeder gas, of course, is commonly low, because of the small percentage of the heavier hydrocarbon gases contained in it. As is well known, pure methane (CH_4) is almost non-luminous.

The heating value of any combustible, whether solid, liquid or gaseous, depends on its composition. In the matter of coal, the chief combustible is the fixed carbon; but the heating value is greatly modified by the amount of volatile combustible matter contained in the coal. The best results are obtained by estimating the heat value of each constituent, in proportion to the percentage present, as determined by the ultimate analysis of the coal.

In the combustion of a gas, the heat of combustion is equal to the excess of the heat of formation of the several products of the combustion, over the heat of formation of the combustible itself. This can only be estimated by means of a thermochemical equation. For the purpose of such a calculation, reference must be had to a table giving the heats of formation of the different mine gases. Such a table is given on page 68, "Mine Gases and Ventilation"—Beard, Eighth Edition.

The entire subject of calculating the heating values of substances and gases is fully treated in those pages. For example, the molecular heat of formation of pure methane (CH_4) is given as 39,060 B.t.u. The products of combustion of this gas are carbon dioxide (CO_2) and water (H_2O) and their respective heats of formation, as given

in the table, are 174,600 and 126,288 B.t.u. The reaction is shown by the chemical equation.



Their being but one molecule of carbon dioxide and two molecules of water formed in this reaction, as shown in the equation, the total heat of formation of the products of combustion, less the heat of formation of the methane; is $174,600 + 2(126,288) - 39,060 = 388,116$ B.t.u., which is the total molecular heat developed when methane is burned. But, the molecular weight of methane being 16, the unit heat of combustion of this gas is $388,116 \div 16 = 24,257$ B.t.u., which is the theoretical amount obtained by calculation.

The experimental heat of combustion of methane, however, is 23,513 B.t.u.

It must be remembered, however, that the composition of feeder gas is very variable. An analysis of natural gas, in the Pittsburgh district, is given as follows (percentage of volume): Methane, 67.0; hydrogen, 22.0; olefines, 6.0; nitrogen, 3.0; carbon monoxide, 0.6; carbon dioxide, 0.6; total volume, approximately, 100. The heating value of the same gas, as determined by experiment, is given as 892.4 B.t.u. per cu.ft. of the gas at 64 deg. F. An interesting problem is to calculate the heating value of this gas, as a check on the experimental value just given.

Examination Questions Answered

Alabama Mine Foremen's Examination, Birmingham, July 24-27, 1922

(Selected First-Class Questions)

QUESTION—If the ventilation of a mine is insufficient, how may it be increased without increasing the power?

ANSWER—Clean up all air-courses, removing every obstruction to the free passage of the air; enlarge all breakthroughs and shorten the course of air travel, as far as that is practicable, avoiding all sharp turns in the airways. Wherever the velocity will permit of further dividing the air, this should be done in order to reduce the mine resistance.

QUESTION—When coal is shot off the solid how should the holes be drilled and what kind of powder should be used?

ANSWER—The axis of the drillhole should make such an angle with the face of the coal and the charge be so located that the line of least resistance, extending from the charge to the face of the coal, will be less than the depth of the hole. The hole must be well tamped and only permissible powder should be used in charging.

QUESTION—Where coal is undercut by machines, is it possible to have a windy or a blownout shot? If so, what would be the cause?

ANSWER—In machine mining, a windy or a blownout shot may result from the hole being drilled beyond the depth of the cutting, making it a shot on the solid. If an undue accumulation of fine cuttings is permitted at the working face, the fine coal and dust will be blown into the air by the force of the shot; and the explosion of the dust clouds thus formed will have, more or less, the same effect as a windy shot. In order to avoid such an occurrence, the fine cuttings of the machines must be removed before any shots are fired.

Much will depend on the soft friable nature of the coal and its inflammability.

QUESTION—In a faulty heading where the sides are showing weight and the roof in the face bad, how would you timber to hold the side squeeze and make progress and safe work in the face? Give sketch of timbering.

ANSWER—As shown in the accompanying figure, heavy timber frames should be used, from 10 to 12 in., either round or square. The legs should be



well notched into the collars and lagging used above the collar beams and behind the sideposts or legs.

QUESTION—How would you timber a room that had bad roof and a soft fireclay bottom? How would you keep your roadway safe?

ANSWER—Under these conditions a systematic form of timbering should be adopted in the room, the posts being set in rows parallel to the face and three or four feet apart, center to center. The posts should be set on footboards or stringers to avoid their sinking into the soft bottom, and long cap-pieces, booms or stringers should be used above the posts to support the frail roof.

On the roadways, the timber frames should be set from 2 to 4 ft. apart, center to center, depending on the depth of cover, and lagging should be used above the collars to prevent the fall of small pieces of slate that would block

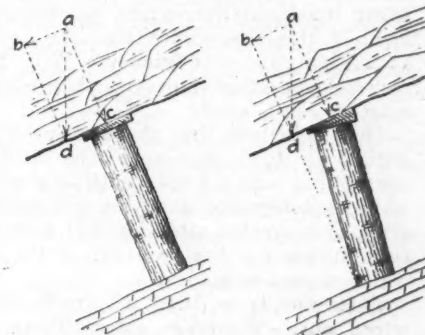
the roads. The legs of the timber frames should be set on stringers, on each side of the track.

QUESTION—If you were firing five shots in the face of a room, with one shot depending on the other, what precaution would you use to prevent a windy shot?

ANSWER—If five shots are to be fired consecutively, one depending on the other, the only safe method to pursue is to fire each shot separately and in order, starting with the first free shot. Dependent shots must not be fired with fuse, on any condition; neither should they be fired electrically, causing practically the simultaneous explosion of all the shots. In firing the shots separately, as stated, time should be given for the smoke and gases produced by each shot to be carried away, before a succeeding shot is fired; otherwise, a local explosion of these gases and dust may result.

QUESTION—In timbering pitching seams, would you underset your props or place them at right angles with the top and bottom? Explain fully with sketch.

ANSWER—In setting post timbers in a pitching seam, the posts should be inclined slightly up the pitch from a normal line. By so doing any slip or movement of the roof down the pitch will tend to tighten the posts. On the left



of the accompanying figure, is shown a post set normal in the seam, or in line with *ac* drawn perpendicular to the strata. Again on the right of the figure is shown a post set inclined up the pitch from the normal line *ac*, or *bd*. It is quite evident that any slip or movement of the roof down the pitch will loosen the post on the left, while the same movement would tighten the post on the right of the figure.

QUESTION—How and in what parts of a mine is coal dust produced?

ANSWER—In a machine mine, the greatest portion of the dust is produced in cutting the coal. The same is true, but to a less extent, in pickmines. Much dust is produced, in all mines, by coal falling off the cars in transit and being crushed to fine coal and dust by travel on the roads. In mines where blasting is performed by black powder, much dust is produced by the miners using excessive charges of powder. Overcharging the holes is not as common in the use of permissible powder. Generally speaking, the largest quantity of dust is produced at the working face.

Sentiment for Control of Coal Prices Bolstered by Unsettled Conditions on Railroads

BY PAUL WOOTON

Washington Correspondent of *Coal Age*

WASHINGTON, Aug. 29—The hope that Mr. Ford will not find it necessary to close his plants on account of coal prices was expressed today by Secretary Hoover. He called attention to the fact that Mr. Ford has signified his willingness to pay \$4.50 for coal. Mr. Hoover expressed the opinion that the price would not be greatly in excess of that figure on Sept. 16, the date set for the closing of the Ford factories. Even should Mr. Ford have to pay \$6.50 per ton for coal after the 16th, Mr. Hoover pointed out that this would not be a heavy tax on his business, since at the present rate of his output the added coal cost, at the very most, would be \$1.50 per automobile.

That the administration has at no time favored putting the government in the coal business was indicated when Secretary Hoover declared emphatically today that the Cabinet never has seriously discussed the seizure of either anthracite or bituminous mines. Mr. Hoover stated that no less than 25,000 cars loaded with non-union coal are awaiting movement. None of the coal mined under the drastic priority requiring one-half of all non-union coal sent to the Lakes has reached the lower Lake ports as yet, he declared.

Principal emphasis is being placed by those opposed to legislation looking to the control of coal prices and distribution on the argument that such control no longer is needed. Many lawmakers are of the opinion that the situation is such that it can take care of itself. Those who favor the legislation might be willing to accept the argument if they were sure that the railroads could function at a high rate of efficiency. With the uncertainty as to railroad operation, however, they contend that this control must be established.

They point out that the emergency will not have passed until coal starts moving to the Northwest at the rate of one million tons a week; until prices show a definite downward tendency and until the anthracite mines are in operation and careful attention has been given the problem of substitution for that portion of the anthracite production which cannot be made up.

Theoretically at least all stocks of coal now have been wiped out. Whatever stocks there may be in fact are known to be negligible and too low to enter the winter with safety. The market cannot be expected to tranquilize until a considerable amount of coal has been put in storage. How soon such a point can be reached depends entirely on the service which the railroads can give. The American Railroad Association makes the ambitious estimate that the carriers can transport 9,000,000 tons weekly. At the National Coal Association it is thought that 8,000,000 tons is the maximum. Disinterested traffic men, however, point out that if coal shipments reach 8,000,000 tons of bituminous, in addition to the anthracite that is expected soon to be moving, and at the same time the usual volume of other freight is handled, the railroads will have performed an extraordinary feat even if there were no strike and if the equipment all was in good condition.

There is an increasing feeling among officials in Washington, however, that the railroad managements are not being entirely frank with them or with the public. They seem to think that the situation with regard to railroad equipment is much worse than the railroads are willing to confess, to say nothing of the question of their ability to attain a high degree of efficiency with the morale of its employees in its present state. The attitude of the railroad executives is compared to that of the coal operators when they declared the strike would be crushed flat by July 1.

Within a week after the Cleveland conference 230,000,000 tons of production had signed on the dotted line. In no case has anyone of the district settlements departed from the Cleveland contract, unless the action of one district in

central Pennsylvania in refusing attendance at the Oct. 3 conference be termed a reservation. Western Pennsylvania, part of northern West Virginia and the Chesapeake & Ohio tonnage in Kanawha are still holding out as this is written, but it is believed here that their effort to get the men back at the 1920 scale, but without signing the contract, will be futile. It seems quite certain that no contract will be signed in western Pennsylvania that does not include the check-off. The operators, officials here believe, have saved nothing out of the wreckage, except that they have not gone through with the old-time Central Competitive Field agreement.

In the meantime the United Mine Workers have threatened to call a strike in the New River district with the idea of forcing a contract there. This action is regarded as significant as foreshadowing a series of strikes in the districts formerly organized but lost to the union in 1921. Even in the Central Competitive Field probabilities point to sporadic local troubles, for in many places the men are reported to be returning to work in an arbitrary and arrogant frame of mind.

Fair Price for Pennsylvania Bituminous Fixed; Name Regional Fuel Committees

THE PENNSYLVANIA FUEL COMMISSION has established a fair price for bituminous coal but has not as yet attempted to fix a fair price for anthracite. At its meeting on Aug. 22 it fixed bituminous prices according to the type of veins in the coal region, \$4.50 a ton, f.o.b. at the mines being the price of coal in District No. 1, including the thin-vein mines, and \$3.75 a ton, f.o.b., for coal at the mines in District No. 2, containing the thick-vein mines. The districts are those designated in 1918 by the Federal Fuel Administration. A commission not exceeding 25c. a ton also was fixed by the commission.

The commission, of itself, has not the power to enforce the rates, but through co-operation with the Interstate Commerce Commission and the Public Service Commission of Pennsylvania holds it can make them effective. Commissioner Clyde Aitchison of the Interstate Commerce Commission will soon confer with the Public Service Commission relative to naming a joint representative of the two commissions as a member of each of the six regional fuel committees, recently announced by the State Fuel Commission. These representatives will be the agents of the Fuel Commission throughout the bituminous districts.

It was originally intended by the State Fuel Commission to name seven regional fuel committees, but the number was reduced to six when the personnel was announced. These committees, to which will be added the joint representative of the Interstate Commerce Commission and the State Public Service Commission, are:

Fayette and Greene Counties—George Whyel, G. S. Harah, E. D. Brown and T. J. McClernan, Uniontown; F. B. Lockhart, W. W. Parshall and W. H. Klingerman, Pittsburgh.

Somerset County—John C. Brydon, W. H. Kramer, Ralph S. Zimmerman and John H. Beerlits, Somerset; Congressman S. A. Kendall, Washington, D. C.; A. B. Stewart, Baltimore, Md.; Thomas Fisher, Philadelphia; T. W. Guthrie, Pittsburgh, and Telford Lewis, Johnstown.

Westmoreland County—T. W. Guthrie, Pittsburgh; J. B. Huff, Greensburg; S. P. Hutchinson, Philadelphia; Frank Graff, Blairsville; Samuel Brownfield, Ligonier; Thomas Fisher, Philadelphia.

Washington and Allegheny Counties—James H. Woods, W. H. Henderson, D. W. Kuhn, Frank M. Wallace, J. T. M. Stonerod and A. W. Calloway, all of Pittsburgh.

Northwest Pennsylvania—Edward Soppitt and Fred Stover, Butler; Samuel Sherwin, Karns City; F. P. Filer, Mercer; J. L. Deegan, Cleveland, Ohio; T. F. Diefenderfer, Butler; R. F. Cann, Stoneboro.

Central Pennsylvania—Charles O'Neill, Altoona; H. J. Meehan, Johnstown; G. Dawson Coleman, Philadelphia; Rembrandt Peale, Clearfield, William Lamont, El Mora; B. M. Clark, Indiana; Harry Bolton, Clearfield; J. R. Casley, DuBois; J. C. Forsyth, Clearfield.

Anthracite Deadlock Blocks Peace in Coal Fields

Although the government has continued to exert pressure to bring the two sides to an agreement, the anthracite operators and miners refuse to recede from their respective positions. Secretary of Labor Davis held a two-hour conference in Philadelphia on Aug. 28 with John L. Lewis and then returned to Washington, where it is understood that he will make a report to President Harding concerning the situation. Anthracite remains the stumbling block to more or less complete peace in the coal fields. Every effort so far has been made to break the deadlock in the negotiations between the operators and miners. The union on the one hand is holding out for a contract at wages and with working conditions the same as before the strike, a contract to extend until April 1, 1924. The men ask a continuance of the high wages for two winters, as compared with their victory in the soft-coal fields that gave it to them for one winter—that is, until next April.

The operators have agreed to extend the expired contract until April 1 next, but refuse to commit themselves to paying the maximum wage beyond that date. They say they are willing to make a contract for any number of years covering working conditions, but ask that the wages after April 1 next be subject to arbitration, either by a board appointed by the President or some other outside party and the award to be either binding or to be merely recommendatory.

The miners refuse to agree to the interjection of any outside party or influence in the determination of their wages, either now or at any future date. It is not the wages that are to be paid this winter that is holding up the resumption of hard-coal mining but the matter of how the next scale is to be determined and when.

Many and powerful influences on the outside are being brought to bear on both parties to reach a settlement. The President has used his persuasive powers and Senators and others have been in conference with John Lewis for days. The pressure from public interests over the hard-coal-burning East is daily growing stronger. Congress is being flooded with protests and is being urged to do something. With the soft-coal strike largely out of the public mind, attention is rapidly being focused on the deadlock in anthracite.

Samuel D. Warriner, spokesman for the anthracite operators, made the following statement Aug. 23, reviewing the steps that have been taken in conferences between the operators and representatives of the anthracite miners:

"Our conferences with the representatives of the anthracite miners, which began on Aug. 17, were brought about in response to the request of the President of the United States, communicated to us by Senator Pepper. The hope was expressed by the President that there might now be found some 'fair basis' on which the suspension of operations in the anthracite fields might be terminated.

"In the proposals we have made to the miners' representatives in the course of the conference we have had in mind not merely the bringing about of a resumption of production, although we think that is most important. We have endeavored to accomplish this, and at the same time to establish a basis looking toward permanent peace and continuous operation in the future.

"It was our belief that this could be best secured by a long-term contract with a provision for periodical revision of wages by arbitration, which should be binding upon both parties. We were entirely willing to accept as a board of arbitration a commission or tribunal to be appointed by the President.

"This having been refused by the miners, we proposed to utilize the existing and familiar machinery of the Conciliation Board, which in the anthracite field has been adjusting disputes between operators and miners satisfactorily for the past twenty years. In case the Conciliation Board, which is composed of equal numbers of operators and miners, should not be able to agree, we proposed that the presiding Judge of the United States District Court of Appeals for the Third Judicial District should appoint three umpires whose decision should be final and binding upon both parties.

"Unfortunately and, in our opinion, unwisely, the representatives of the miners rejected this proposal.

"In a further effort to meet their opposition to binding arbitration, however impartial, we made the following proposal:

"All mines to resume operation upon the execution of a contract extending to March 31, 1923, the wages and working conditions which were in effect March 31, 1922. This contract to provide that:

"(a) On Jan. 3, 1923, the Anthracite Board of Conciliation shall meet in conference and determine wages and working conditions in the anthracite field effective for a period of one year beginning April 1, 1923. On Jan. 3, 1924, the board shall meet in like manner to determine wages and working conditions for a period of two years beginning April 1, 1924.

"(b) In case there has been no agreement prior to Feb. 15 in the years 1923 and 1924, the Presiding Judge of the United States Circuit Court of Appeals for the Third Judicial District shall appoint three disinterested citizens of outstanding character and ability, who shall sit with the board to hear the argument and make findings with respect to the matters in dispute. These findings shall be rendered on or before March 15, shall be recommendatory in character, and shall be subject to acceptance or rejection by either party within ten days thereafter."

"This proposal, representing the extreme of concession by the operators, was rejected by the miners' representatives Aug. 22. We have offered to consider any practical modification of these plans which would not sacrifice the ends sought. The miners' spokesmen declined to make any such suggestions. They can speak for themselves as to their attitude. To us their plan seems to be indefinitely to retain war-time wages regardless of any other considerations.

"It will be noted that our suggestion embodies the use of the Conciliation Board instituted in the anthracite field by the Roosevelt Commission in 1903. The board's personnel includes the three district presidents of the miners' organization in the anthracite field in conjunction with three operators. Matters in dispute which the board finds itself unable to adjust are referred to an umpire appointed by the Presiding Judge of the Circuit Court.

"Our suggestion only embodied by way of change, therefore, the appointment of three umpires instead of one, in order that a matter so important as a general contract might receive that impartial consideration necessary to a proper acceptance on the part of those interested, including the consumers of anthracite coal.

"While we realize that the proposal now made may be considered defective in that the findings of the umpires are not binding, it is nevertheless hoped and believed that the findings arrived at under such circumstances would afford the basis for a peaceable and orderly settlement and tend to avoid suspensions of mining hereafter.

"The necessity for some method by which recurring periods of idleness in our industry may be avoided, in so far as possible, is conceded by all. The mutual responsibilities of the operators and the miners demanded the most serious consideration and prompt acceptance of this proposal. These responsibilities require that the production of anthracite shall be resumed at the earliest possible date, and that we shall at the same time remove the menace of another suspension next year.

"We are hopeful, in spite of the rejection of our last proposal, that wiser second thought will bring about its acceptance. Continued opposition on the part of the miners to any plan which seeks to avoid another suspension carries with it a heavy responsibility. It means that the officials of the United Mine Workers assume responsibility for the suffering on the part of the public and the miners themselves that may result from further delay in resumption of production. It means that rather than agree even to an advisory finding as to future wages the miners' representatives are willing to deprive the people of a large section of the United States of essential fuel. We cannot believe that this stand will be maintained. If it is, there can be no question as to where the responsibility lies for the consequences that may follow."

Central Pennsylvania Signs Agreement and Goes to Work; May Be Only a Truce

CENTRAL PENNSYLVANIA—that is, the strictly union part of that field—has reached an agreement with the United Mine Workers and gone to work. It took three days of fighting, arguing and the usual scale-meeting stuff to put it over, but on Wednesday night, Aug. 23, the contract was approved by both sides and the miners were ordered back to work. Prior to this there were several large companies, including the Pennsylvania Coal & Coke Corporation and the Clearfield Bituminous Coal Corporation, that had signed with the union at Cleveland as individuals and have been at work for more than a week.

But not all mines in the field are going. There are those operators who have both non-union and union mines. Several large companies are in this class, part of them with both kinds in Pennsylvania and some with union mines in other states or fields and non-union mines in this field. The union has adopted a policy of offering such operators the same contract for all their mines, thus forcing them to unionize their open-shop mines or leave the union mines idle.

The agreement is between representatives of the United Mine Workers of District No. 2, the Association of Bituminous Coal Operators of Central Pennsylvania and the Central Coal Association. In accordance with a plan adopted early in the week, a sub-scale committee was appointed to take up the wage question. On the part of the operators this committee was composed of Charles O'Neil, J. Webb Shillingford, J. R. Caseley, C. B. Maxwell, Rembrandt Peale and J. William Wetter. The personnel of the United Mine Workers was President John Brophy, Vice-President James Mark, Secretary Richard Gilbert, Harry Crago, Stanley Hudzinski, Herman Carletti and Reno Glazzone.

Agreements and counter agreements were presented. The sub-committee would meet jointly and then separately and vote down proposals. The whole question finally settled down to a rejection of the Cleveland agreement and the check-off system, which was vigorously attacked by the operators and just as vigorously upheld by the U.M.W.

The end came after a series of sessions lasting for six hours. The final agreement, accepted and signed by both sides, was presented by Charles O'Neil, secretary of the Central Coal Association. The agreement follows:

It is hereby agreed by and between the officers of District No. 2, United Mine Workers of America, the Association of Bituminous Coal Operators of Central Pennsylvania and the Central Coal Association that the working agreement terminating March 31, 1922, is hereby renewed and extended to March 31, 1923, in all of its provisions as to wages and working conditions, except that part of Rule 25 reading as follows:

"In the event of a new scale agreement not having been signed on or before March 31, 1922, then and in that event the U.M.W. of A. of District No. 2 will continue all men in mines regularly at work under the wages and conditions of this agreement for an additional thirty days after the date on which the scale committees of the operators and miners hold their first meeting for the purpose of negotiating a scale to succeed this present scale. On reaching an agreement to succeed this present contract the wages paid by the operators to the miners dating from April 1, 1922, for such portion of the thirty days' work as extend beyond April 1, 1922, shall be those that are agreed to in the next contract," is to be stricken therefrom in accordance with the policy adopted by the Policy Committee of the United Mine Workers of America, Aug. 15, 1922.

An annual tonnage of 30,000,000 is represented in the settlement effected, which is about 75 per cent of the output of the union mines of the district. Most of the mines are in shape for immediate resumption. President John Brophy at once got in touch with the locals at each operation and ordered the resumption of work.

The general feeling is that as this agreement will terminate on April 1, 1923, it is but little more than an armistice and the mines will scarcely get into operation until the battle will be resumed.

Dr. W. Frank Beck, one of the leading operators, with headquarters in Altoona, puts much of the blame for fuel shortages on the large consumer. Dr. Beck declared that early last spring he begged a big steel company to stock up with coal as low as \$1.85 at the mines, but it would not buy. He declared that after the strike had been in progress only a short time this same company came into the field

and offered any price, paying as high as \$8 for coal wherever it could get it.

In considering ways and means of checking the advance in prices at Ohio, lake ports and cities to the north of the state, George Poor, Fuel Administrator, certified to the Federal Fuel Commission that \$4.50 seemed to be a fair price for Ohio coal on a run-of-mine basis. It is unlikely, however, that there will be regulation of prices, as operators have refused to take part in conferences on prices, fearing conflict with federal statutes.

Connellsville Goes Back to 1920 Peak Scale

In only one instance does the wage scale posted in the Connellsville coke region Aug. 23 differ from that of September, 1920, the highest war level. That instance is for outside labor. Whereas the rate for that class of labor under the 1920 scale was \$5.40 the present scale calls for \$3.40. The scale and the one it succeeds follow:

	Aug. 1, 1921	Aug. 23, 1922
Pick mining and loading room and rib coal, per 100 bu.	\$2.38	\$3.24
Pick mining and loading heading coal, per 100 bu.	2.63	3.56
Pick mining and loading wet heading coal, per 100 bu.	2.77	3.85
Loading shortwall machine coal, per 100 bu.	1.50	2.10
Drawing coke (hand) per 100 bu. charged.	1.40	2.16
Drivers, rope riders, cagers, track layers, blasters, and timbermen (shafts and slopes) per day of 8 hours.	5.05	7.55
Drivers, rope riders, cagers, track layers, blasters and timbermen (drifts), per day of 8 hours.	5.00	7.50
Assistant tracklayers and assistant timbermen, per day of 8 hours.	4.35	6.75
Fire bosses, per day.	6.30	8.80
Mine laborers, per day of 8 hours.	4.15	6.55
Leveling, per oven (hand).	.20	.31
Outside day laborers, per day of 9 hours.	3.00	3.60

RAISE NEW RIVER WAGES, BUT NO UNION AGREEMENT

Although New River operators have declined to sign any agreement with the union, wages have been increased and the following scale of rates adopted:

Pick mining, room and pillar work.	\$0.8311
Machine cutting.	0.1600
Loading and scrapping rooms and pillars.	0.6603

Inside Day Wage Scale

	Per day	Per day
Motormen and machine runners.	\$7.18	Timbermen..... 7.05
Brakemen.	6.77	Pumpmen..... 6.70
Trip rider, rope haulage.	6.77	Bottom cagers..... 6.85
Skilled wiremen.	7.18	Drivers, single mule..... 6.65
Wiremen's helpers.	6.74	Drivers, two or more mules..... 6.77
Tracklayers.	7.05	Couplers—boys..... 4.00
Tracklayers' helpers.	6.65	Couplers—men..... 6.60
Slate shooters.	6.89	Greasers—men..... 6.60
Slatemen.	6.65	Greasers—boys..... 4.00
Bratticemen.	7.05	Trappers..... 4.00
		All other inside day labor..... 6.60

Outside Day Wage Scale

	Per day	Per day
Dumpers.	\$6.65	Blacksmiths' helpers..... \$6.80
Top tipplemen.	6.58	Car repairmen..... 7.06
Transfer operators.	6.50	Greasers—men..... 6.50
Trimmers.	6.50	Greasers—boys..... 3.85
Drum runners.	7.10	Couplers—men..... 6.50
Car cleaners.	6.50	Couplers—boys..... 3.85
Blacksmiths.	7.50	

Sign Pact in District 18 Without Wage Cut; Western Canadian Men Take Reduction

The strike in District 18, which is composed of eastern British Columbia and Alberta, has been settled and the mines were opened for work Monday, Aug. 28. The terms of settlement practically mean that the Cleveland agreement has been accepted and that the men go back without a reduction in wages.

Miners and operators of western Canada have signed an agreement by which the miners will return to work at 15 per cent wage reduction from 1921 rates, it was announced by the Department of Labor Aug. 25. The operators had asked for a 20 per cent reduction.

Wage Increase for Alabama Miners

Wages of coal miners in the Alabama field will be increased 20 per cent on Sept. 1, according to an announcement from Birmingham Aug. 26. About 26,000 men will get the increase.

Coal-Commission Legislation, If Passed, Likely to Be Combination of Winslow and Borah Bills

Unless displaced by emergency legislation, it is believed that a bill to create the United States Coal Commission with authority to investigate the coal industry and report conclusions and recommendations to Congress and to the President will be enacted into law before another week has passed.

The administration has not indicated a preference between the Winslow bill, passed by the House, and the Borah bill, pending in the Senate. It is said that the President would be satisfied with either. It is probable that in its final shape the law will be a combination of the two bills, put together in conference.

The principal points of difference are that the Winslow bill provides a commission of not more than nine members, while the Borah bill provides for five; the Winslow bill carries an appropriation of \$300,000 and the Borah bill, \$100,000; the Borah bill goes further than the Winslow bill and instructs the proposed commission to report recommendations on standardization of wages and working conditions, standardization of work to be done for a living wage, standardization of mine efficiency looking to closing of those mines having low efficiency and high productive costs and the advisability or wisdom of nationalization of the mines together with advisability of governmental control and regulation.

The Winslow bill, favorably reported to the House the day after its introduction by Representative Winslow, of Massachusetts, chairman of the Committee on Interstate and Foreign Commerce, which considered the measure, was launched with a stormy future due to the rules committee getting out of hand, but through quick work of administration leaders on the floor this was straightened out and the bill was passed the same day by the House. The vote was 219 to 55, with four Republications opposing it and 24 Democrats voting for it.

The bill was amended before passage on motion of Representative Bankhead, Democrat, of Alabama, to reduce the salaries of the commissioners from \$10,000 to \$7,500 annually and on motion of Representative Moore, Democrat, of Virginia, to reduce the appropriation for the commission from \$500,000 to \$300,000. Otherwise efforts to amend were rejected, excepting a perfecting amendment to make the intent clear.

In order to report a special rule setting the bill for consideration, the rules committee was called Wednesday morning. This committee, instead of voting a special rule for the Winslow bill, voted 5 to 3 to report a special rule setting the Bland investigation bill as a special order of business. The Bland bill was reported favorably by the labor committee some weeks ago, after extensive hearings. The administration objected to some of its features. Floor Leader Mondell, of the Republicans, had announced that the Winslow bill would be called for special order before he was informed by Minority Leader Garrett of the action of the rules committee. Representative Mondell hastily had a lieutenant make the point of no quorum and while the roll of the House was being called another meeting of the rules committee was summoned and a larger attendance was drummed up. At this meeting the earlier action was rescinded and a special rule was ordered out, setting the Winslow bill for consideration. Meanwhile, however, other administration leaders had succeeded in getting the Winslow bill reported in regular order, so it was under consideration when the special rule was brought out.

Representative Bland, Republican, of Indiana, made three separate attempts to substitute his bill for the Winslow bill, without success. He objected to the new bill mainly, he declared, because it had no "teeth" while the labor committee had given careful consideration for weeks to his measure. In the final vote Representative Bland voted for the Winslow bill.

Representative Denison, Republican, of Illinois, declared that the Winslow bill was not wholly satisfactory and made

efforts to reduce the number of commissioners from nine to five, but without success.

The bill bore the stamp of approval of President Harding, declared Representative Winslow, having been submitted to the President less than two hours before it was introduced.

Minority Leader Garrett opposed the bill, declaring it to be "useless."

While the Winslow bill was being passed by the House the Senate Committee on Education and Labor was busily rewriting the Borah fact-finding bill, and reported it favorably to the Senate with various modifying amendments. The rewritten Borah bill provided for a commission of five members, with salaries of \$7,500 each; the commission to exist a year and to report first within five months. An appropriation of \$100,000 was provided. The Borah bill followed the same line of instructions as to the duties of the commission as contained in the Winslow bill, but went further in instructing the commission to report recommendations relative to standardization of mines upon productive capacity; standardizing cost of living for mine workers; standardizing the amount of work a man shall do for a reasonable wage, this latter having been put into the bill by Senator duPont; standardizing a basis of arriving at overhead cost of production and distribution of coal to the ultimate consumer; advisability or wisdom of nationalizing the coal industry, and feasibility or necessity of governmental regulation and control.

When the Winslow bill came from the House to the Senate it was referred to the Committee on Education and Labor, of which Senator Borah is chairman, which promptly struck out all after the enacting clause and substituted the Borah bill, with a favorable report.

On the floor the Borah bill was amended on motion of Senator Reed, Democrat, of Missouri, to provide that not only members of Congress be excluded from membership on the commission but that all federal government officials be debarred. This would exclude any members of the Cabinet.

Lively debate on the bill took place in the Senate. No Senator declared himself directly in opposition to the fact-finding commission bill, but many argued that additional legislation, to meet the immediate needs of the situation, was necessary.

Senator Sutherland, of West Virginia, assailed that part of the Borah bill directing the proposed commission to report on the advisability of nationalization of the coal mines. Senator Edge, of New Jersey, also criticized this same provision, while Senator Stanley, of Kentucky, attacked it caustically. Senator Borah declared that information on this question should be in possession of Congress and that no one should object to having information on any subject.

Senator Reed, of Missouri; Shields, of Tennessee, and Fletcher, of Florida, declared the fact-finding commission would "get nowhere" with the problem and while they did not directly oppose passage of the bill they characterized it as useless legislation and not what should be brought forward in the emergency.

Guard Remains in Pennsylvania Fields

NO CHANGE IN THE LOCATION of the Pennsylvania National Guard units now in the bituminous field are contemplated by Governor William C. Sproul. It is held that the resumption of work, urged as a reason by union men for the withdrawal of troops, is the best reason why the troops should be retained at their present stations.

A detail of state police was sent last week to Valley Camp, Westmoreland County, when the Valley Camp Coal Co. started operation recently under the Cleveland agreement. In a poll of the employees, according to word received by the state police, 180 voted to accept the agreement and return to work and 160 voted against resuming work.

Illinois at One-Third Full Speed in Four Days; Surrender Not Complete, Some Feel

On Saturday, Aug. 26, four days after the signing of the Illinois mine peace—a peace based on the Lewis terms as laid down in Cleveland but not pledging the operators to take part in President Lewis' coming wage conferences—the mines of the state had attained only about one-third their normal rate of production.

The first day or two of work in the mines was devoted to getting tools and machinery down into the ground and to cleaning up and inspecting. Actual mining of coal did not get under way until Friday. By Saturday the best report from any mine in the state showed that on the previous day—the last full day of the week—a 60-car mine had loaded and shipped 42 cars. Other reports ranged down to two or three cars and some mines failed to make a turn-in. It was estimated by experts that the output of the state was close to 30 per cent of normal. Railroads were able to supply cars in plenty at most mines but the inevitable shortage was said to be hampering a few mines near St. Louis.

A good deal of opinion is expressed as to the strength of the tactical position which the Illinois operators assumed when they framed up their peace with Farrington in Chicago, Aug. 22. It was authoritatively stated that the omission of clauses binding Illinois to take part in the Lewis plan for making the next wage scale practically amounts to a black eye for Lewis. It is said to put that state in a better position to assist in a possible federal investigation of the coal industry and that if enough union and non-union tonnage throughout the land is in a similar position, then an outside authority could more readily arrive at constructive conclusions that might be at variance with the autocratic ideas of John L. Lewis, president of the miners' union.

It can be calculated that about 320,000,000 tons of production might take the Illinois position, making the estimates thus: Illinois, 90,000,000; Pennsylvania, 50,000,000; West Virginia, 90,000,000; Kentucky, 31,000,000; Alabama, 19,000,000; Colorado, 12,000,000; Virginia, 10,000,000; Kansas, 7,500,000; Tennessee, 6,500,000; Missouri, 5,500,000; southern Ohio, 10,000,000. If this formidable total of 321,500,000 tons were to line up in full and free co-operation with such a coal commission as may be created under the Winslow bill, that commission might arrive at the facts about coal in such a way as seriously to hamper the Lewis program of wage making next winter and spring.

But there is a variety of opinion among Illinois operators as to the defensive value of their freedom from obligation to meet Lewis Oct. 2 and Jan. 3 in Cleveland. Some say that they were glad to see an opportunity to make peace without having the entire Lewis program shoved down their throats and that the form of Illinois peace at least gives them a little time to spar with the union before the next clinch but that they suppose when Oct. 2 comes around they will see that nothing better remains for them to do than attend the Lewis meeting and draw a hand in the new game as a matter of plain self-defence. Even W. K. Kavanaugh, president of the 5th and 9th District Operators' Association, said after the Illinois agreement had been signed that he

supposed Illinois would take part in the Lewis conferences.

The form which was signed at Chicago follows:

It is hereby agreed by and between the officers of District No. 12, United Mine Workers of America, and..... that the working agreement which terminated March 31, 1922, is hereby renewed and extended to March 31, 1923, in all of its provisions as to wages and working conditions, excepting that the 32nd clause is to be stricken therefrom in accordance with the policy adopted by the policy committee of the United Mine Workers of America, Aug. 15, 1922.

The 32d section, referred to, is as follows: "The joint executive boards are authorized and instructed to arrange for negotiations for the formation of a new contract to begin at a date not later than the expiration of this contract."

Indiana Signs Cleveland Pact, but Refuses To "Approve" It in Peace Document

Most of the 30,000 striking union coal miners in Indiana are back at work again under the old terms and conditions, just as the men of Illinois are. The Indiana operators signed with their miners in Terre Haute on the basis laid down at Cleveland by President Lewis of the international union but they did refuse one demand of their men. The peace document as first spread on the table by John Hessler, president of District 11, called for the operators not only to "accept" but also to "approve" the Cleveland plan. The operators shied away from the dotted line until the offensive word "approve" had been scratched.

In its final form, the Indiana peace was made thus:

"That the terms, provisions and conditions of the Terre Haute agreement, which was in effect in District No. 11, United Mine Workers of America, on March, 1922, be hereby extended to April 1, 1923, and that the mines of the signers of the supplementary agreement shall be opened immediately upon the execution of this supplementary agreement.

"The signers of this supplementary agreement and those whom they represent accept the policy adopted by the joint conference of miners and operators held in Cleveland, Ohio, Aug. 15, 1922."

This agreement was signed by the Indiana Bituminous Coal Operators' Association and the Indiana Coal Producers' Association, which is the strip-mine operators' group.

Probe of Herrin Massacre Under Way

A grand jury in "bloody" Williamson County, Illinois, convened Aug. 28 to begin action against those responsible for the Herrin massacre, June 22, in which nineteen non-union men were killed and thirty wounded after they had surrendered to an attacking mob at a strip mine. It is a special sitting called by Judge Dewitt T. Hartwell, of the Williamson County Circuit Court, at the instance of Attorney General Edward Brundage. The session is in Marion, 10 miles from the scene of the butchery.

The court made it plain that there are two sets of killings to be investigated. The first is the shooting of three union miners by the strike guards at the Southern Illinois Coal Co. plant on June 21. The Cononer's jury put the blame for this on the coal company officials.

Receipts of All Coal by Lake in the Northwest

Figures Compiled by L. M. Mann, Assistant U. S. Engineer, Milwaukee District.

Locality	1917 to 1919 Inclusive Average	1920	1921	1922 to August 1	Per Cent of Amount Required	Remarks
Sault Ste.-Marie Locks (*)..	16,685,138	13,947,062	14,763,155	745,047	4.4	Duluth District
Duluth-Superior only (*)..	10,442,864	9,030,696	10,164,849	397,210	3.8	Included in Duluth district
Milwaukee District.....	7,086,352	6,313,403	6,914,358	1,504,557	21.0	W. & E. Shore, Lake Michigan
Milwaukee only (*).....	4,367,911	3,662,219	3,993,913	997,037	22.4	Included in Milwaukee district
Chicago District.....	1,898,880	2,002,799	1,667,665	617,138	33.0	Chicago to Michigan City incl. Gary
Detroit District (*).....	459,879	623,255	Not available	Not available	Except the "Soo"
Total.....	26,130,249	22,804,519	21,677,513	2,866,742*	11.0	

*Total passing the "Soo" (west bound) and therefore covers the Duluth district and shipments to Canadian ports.

Figures marked (*) not included in totals.

Including car ferries.

Incomplete, port at City of Detroit not reported since 1920.

About 11 per cent of annual requirements for the Northwestern district.

Price-Control Bills Favorably Reported in Both Houses; Hoover Urges Enactment of Winslow Measure

Regulation of the sale price of coal through denial of car supply to those who charge unreasonable profits and control of distribution of fuel are provided in similar bills introduced in Congress last week by Senator Cummins and Representative Winslow, chairmen of the interstate commerce committees of the two houses. It is said that the bills in general have the approval of the administration and that they were drafted with the co-operation of the Department of Justice and the Department of Commerce.

During consideration of the Cummins bill by the Senate Interstate Commerce Committee the question was raised as to whether the bill would be effective in controlling the retail price, and suggestions were made for an additional section to cover this point more specifically. Demand also was made that before legislation of such drastic nature be enacted, or recommended, parties at interest be called to give their views.

Both bills would amend the Transportation Act to enlarge the powers of the Interstate Commerce Commission to include authority to issue orders for priority or embargoes for or against any carrier or region or corporation or person, to assure equitable distribution of fuel and to prevent the purchase or sale of coal by any person, corporation, partnership or association at "prices unjustly or unreasonably high." There is to be created a Federal department of Fuel Distribution, with a Federal Fuel Distributor to be appointed by the President, who may appoint assistants and who shall investigate whether and where shortage of fuel exists, fields of production and markets, nature and location of consumers, prices normally charged and whether current prices, with fair profits, are just and reasonable, and make recommendations to the Interstate Commerce Commission.

Under the Cummins bill the act would expire whenever the President declares by proclamation that the emergency has ceased. Under the Winslow bill, the act would become permanent and would be suspended by Presidential proclamation at the end of the present emergency but remain on the statute books so that it could be invoked again should a similar emergency arise in the future.

Both bills carry an appropriation of \$250,000. The Winslow bill would make not to exceed \$50,000 of this sum available for payment of expenses incurred by governmental agencies in connection with the coal situation since May 15.

Without a record vote, the Senate Interstate Commerce Committee Monday ordered a favorable report on the Cummins bill, after it had been decided definitely not to hold public hearings on the measure. The bill was amended to provide that it shall expire at the end of a year and to make specific the fact that its provisions apply only to interstate commerce.

Favorable report on the Winslow bill was ordered by the House Interstate Commerce Committee Monday evening, with slight amendments in phraseology, and after four witnesses had been heard by the committee Republican Leader Mondell announced that he expected the bill to pass with two days' debate.

Appearing before the House committee, Secretary of Commerce Hoover urged enactment of the bill into law. He declared that the powers of the federal authorities are not sufficient to meet the situation despite the improvement by reopening of many bituminous mines. He declared that from 90 days to six months would be required to relieve the existing "coal famine." While the majority of the operators have held prices within reason by voluntary agreement, the Commerce Secretary declared that some weapon should be given the government to force fair prices upon those who would profiteer from the situation.

J. D. A. Morrow, vice-president of the National Coal Association, informed the committee that he believed most of the operators would oppose the bill. He did not believe it would accomplish any good purpose, he said, but would hamper operations by governmental interference with legitimate channels of trade.

C. B. Aitchison, member of the Interstate Commerce Commission, urged adoption of the bill as he said the commission needs added authority to accomplish what is now expected of it.

Edgar Wallace, a representative of the American Federation of Labor, told the committee that generally the bill was satisfactory to labor, but that price-fixing in principle is regarded as dangerous.

A bill giving the President authority to take over and operate mines during any emergency was introduced in the Senate on Aug. 25 by Senator Edge, of New Jersey.

Meanwhile, other bills, according to the ideas of individual members, are making their appearance. Representative Dickinson, of Iowa, has introduced a bill to create a coal commission of four members to fix wages and working conditions in the industry in the event of a disagreement and with broad powers to regulate prices on the basis of cost of production plus not more than 10 per cent profit. This bill was referred to the Interstate Commerce Committee of the House, where it is expected to die.

Representative Brennan, of Michigan, has introduced a joint resolution authorizing and requesting the Interstate Commerce Commission, Department of Commerce and other agencies to take steps to conserve coal by denying fuel to non-essential industries, by closing electric signs, and other means.

Ends Federal Control by Federal Agencies

"Because of the general resumption of bituminous mining, no more coal will be directed by the Federal Fuel Distributor to the different states—except the Upper Lakes—under emergency orders under class No. 1 unless the situation should again warrant such forced measures," says a formal statement issued Monday night by Mr. Spencer. Continuing it says:

"All coal will be permitted to move as far as practicable under the Interstate Commerce Commission classified priorities. Thus the Federal Fuel Distributor will issue no more No. 1 priority orders for coal to move to state organizations except possibly in connection with a plan for lake shipments.

"Coal shippers holding priority No. 1 orders placed through the Federal fuel distribution agencies are expected to complete shipments on such orders unless by mutual agreement between shippers and the consignee.

"The issuance of emergency priority orders of class No. 1 for railroads will continue until such time as the Interstate Commerce Commission has provided other plans for caring for the railroad requirements.

"A new plan is being worked out under the Interstate Commerce Commission to secure an assurance of reasonable lake movement up to the capacity of lake transport.

"The agreement as to price restraint with the non-union operators expires today with the resumption of the union bituminous mines. The various district and general committees will cease to function as of Sept. 2. About 70 per cent of the non-union operators have held to this agreement, and it is felt that the public has been saved a large sum.

"Pending the action of Congress and the state authorities, the only restraint upon price is the schedule of fair prices declared by Governors or state coal commissioners in some of the states, to which it is earnestly hoped the operators and dealers will conform.

"The legislation before Congress can only control the price of coal moving over state lines—that is, in interstate commerce. The price of coal produced and consumed in a state, together with the charges which wholesalers and retailers within the state may make, the latter including even interstate coal, should be controlled by the state authorities. Therefore, there can be no real control of profiteering unless the state authorities act."

Drastic Fuel Bill Presented in New York Legislature and Quickly Passed

Under the urgent insistence of Governor Miller that there exists an emergency directly affecting the public health and welfare requiring governmental regulation and control of the supply of fuel during such emergency and its equitable distribution to consumers at reasonable prices, the New York State Legislature on Aug. 28 introduced a measure intended to solve the fuel problem in New York State. The measure, known as the Hewitt-Jesse bill, was passed without change on Aug. 29.

The measure creates the office of state fuel administrator "to continue until by proclamation of the Governor the emergency requiring its creation is declared no longer to exist." It provides for general supervision over the receipt, transportation, distribution and allotment of fuel to various sections of the state; price fixing of fuel by the administrator; seizure and sale of surplus stock of coal held, contracted for or arranged for in excess of the average requirements of any individual, manufacturer, wholesaler or dealer, with a provision for the immediate payment therefore after its sale to the person from whom such coal is taken; the creation of a revolving fund for the purchase and sale of fuel by the state administration, if "the Governor by a certificate filed in the office of the Secretary of State shall declare that the emergency be so acute that the exercise of such powers is required."

For the purpose of creating the revolving fund and paying the expenses of the administrator the sum of ten million dollars is appropriated.

Others features of the bill include the right of municipalities to curtail the use of gas and electric signs, the right of the administrator to prevent the waste of fuel, the right of the administrator to adopt rules and issue orders with the same force and effect as law, the temporary suspension of that provision of law which calls for the purchase by municipalities of fuel after advertising for bids, etc.

A measure was also introduced authorizing the city of New York to increase from two to five million dollars the amount of money the city may borrow in one year on certificates of indebtedness and allowing such city to engage in the business of buying and selling fuel.

Southwest Also Settles on Cleveland Basis

The mines of the Oklahoma and Arkansas fields are resuming work following a settlement reached at Kansas City, Aug. 23, based on the Cleveland agreement. The wage scale and working conditions of 1920-22 are extended to April, 1923. The operators insisted upon writing into the agreement a clause aimed to guarantee that all miners who have been working in certain of the mines shall not be discriminated against. It will be several days before production reaches full speed in the field.

F. S. Peabody, Chicago Operator, Dead

Francis S. Peabody, chairman of the board of the Peabody Coal Co. and long rated as one of the ablest men and most striking figures in the American coal industry, died suddenly of heart disease Sunday, Aug. 27, while on a fox hunt on his estate at Hinsdale, Ill. He was 63 years old.

Mr. Peabody, who was born in Chicago, educated at Phillips Academy and Yale ('81), first was a bank messenger boy in Chicago and then, in 1883, a partner in the small retail coal firm of Peabody, Daniels & Co. This concern later became the Peabody Coal Co., which developed swiftly into the largest retail coal business in Chicago, out of which the present Consumers' company evolved. Branching out into coal mining, the company spread its network of mines until today it owns or operates for others a string of forty-six soft-coal mines from the Sheridan field of Wyoming to the newly controlled Erie mines of Pennsylvania. The stronghold of the company is in the central and southern fields of Illinois. The remarkable success of the Peabody Coal Co. and its subsidiaries is directly to be credited to

the genius and resourcefulness of Mr. Peabody and of the group of men with which he surrounded himself. His only son, Stuyvesant, is president of the company.

Mr. Peabody was long active in Democratic Party politics nationally, once having been boomed for U. S. Senator from Illinois, and was chosen by President Wilson to direct the financial end of the party's 1916 campaign in the Western States. In 1917 he served in Washington as chairman of the Coal Production Committee of the Council of National Defense. He was decorated by the King of Italy for



F. S. PEABODY

his war work, which included strong support of the Salvation Army. Of recent years Mr. Peabody had been withdrawing by degrees from the more vigorous business activities and had been spending all the time he could on his model farm enjoying his hobbies, which were dogs, horses and the collection of original Robert Louis Stevenson manuscripts. The funeral was arranged for Tuesday, Aug. 29, with burial in Hinsdale.

U. S. Steel Corporation Advances Wages 20 Per Cent Beginning Sept. 1

An advance of 20 per cent in wages, to become effective Sept. 1, was announced Aug. 22 by the United States Steel Corporation. This is the announcement:

"The wage rates of day labor at the manufacturing plants of the Steel Corporation have been increased about 20 per cent, to become effective September 1. Other rates will be equitably adjusted."

Other wage announcements by the Steel Corporation have been as follows, according to the *Iron Age*:

Jan. 6, 1916,	10 per cent increase.
May 1, 1916,	10 per cent increase.
Dec. 15, 1916,	10 per cent increase.
May 1, 1917,	10 per cent increase.
Oct. 1, 1917,	10 per cent increase.
April 15, 1918,	15 per cent increase.
Aug. 1, 1918,	10 per cent increase.
Oct. 1, 1918,	8-hr. basic day adopted.
Feb. 1, 1920,	10 per cent increase.
May 16, 1921,	20 per cent decrease.
June 6, 1921,	basic 8-hr. day abolished.
Aug. 29, 1921,	decrease to 30c. per hr.

The following table shows the wages of common labor after each advance or decrease in wages by the United States Steel Corporation:

Date	Wages 10-Hr.	Date	Wages 10-Hr.
1915.....	\$2.00	Aug. 1, 1918.....	\$4.20
Feb. 1, 1916.....	2.20	Oct. 1, 1918.....	*4.62
May 1, 1916.....	2.50	Feb. 1, 1920.....	5.08
Dec. 15, 1916.....	2.75	May 16, 1921.....	†4.05
May 1, 1917.....	3.00	July 16, 1921.....	†3.70
Oct. 1, 1917.....	3.30	Aug. 29, 1921.....	3.00
Apr. 15, 1918.....	3.80	Sept. 1, 1922.....	3.60

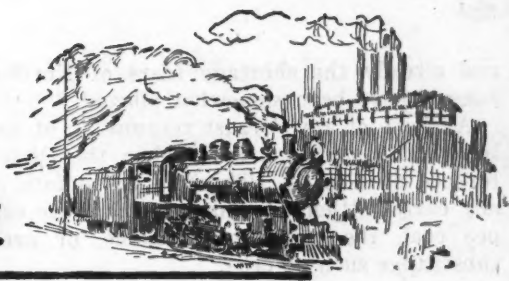
* Eight-hour basic day established and time and one-half paid for overtime.

† Approximated.

Independents generally have announced that they will meet the advance made by the Steel Corporation.



Production and the Market



Weekly Review

AS PRODUCTION increases with mines opening under the Cleveland wage agreement more coal is beginning to flow in its accustomed grooves. Much of the output is still going on priority orders but the heavier production has permitted contract shippers to again supply some of their regular trade.

Spot offerings also have increased, but the rank and file of consumers are less anxious to buy. Railroads, utilities, steel plants, etc., are the heavier takers of spot tonnage but the high-priced demand has fallen off rapidly with the partial resumption of union mining.

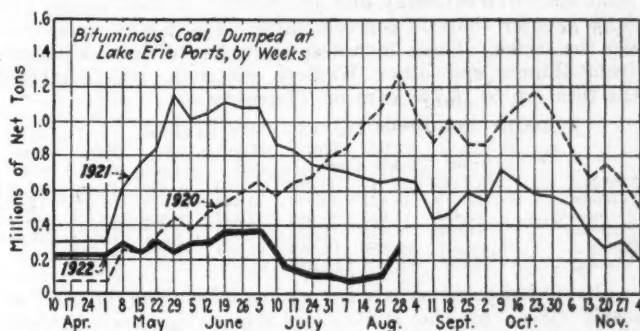
RECESSION IN DEMAND ONLY TEMPORARY

Prices of spot coal reflect the weakened demand. Coal Age Index of spot bituminous prices dropped 93 points to 437 from 530 a week ago. The softening was most apparent in central Pennsylvania and in western Kentucky, while Pocahontas stood firm. The market range is gradually narrowing down to the Hoover basis, although a full dollar over the fair price is still a representative spot figure. The smaller consumer is badly in need of coal, but as he sees the market softening, is delaying entering his order from day to day. He has skated on thin ice for several weeks and is willing to take a chance for a while longer. As soon as improvement in production appears permanent he is bound to replenish his reserves and this buying rush will more than keep prices from dropping below fair-price levels.

Meantime no-bills are appearing in Illinois and Indiana, where union mines have resumed, and it is evident that a four-day week is the best that can be expected, even were transportation facilities more adequate. The St. Louis fuel committee has ceased to function and the situation has lost its serious aspect. Throughout the Middle West the general steam demand is light, domestic call is leading, and Kentucky coals, caught en route by the heavier union mining, have sold off. There is much Kentucky and Alabama tonnage rolling and this must be absorbed before a healthy demand can develop

for Illinois or Indiana coals. Ohio No. 8 mines are rapidly getting into operation but are hampered by the lagging demand and a car shortage on the B. & O. and W. & L. E. roads.

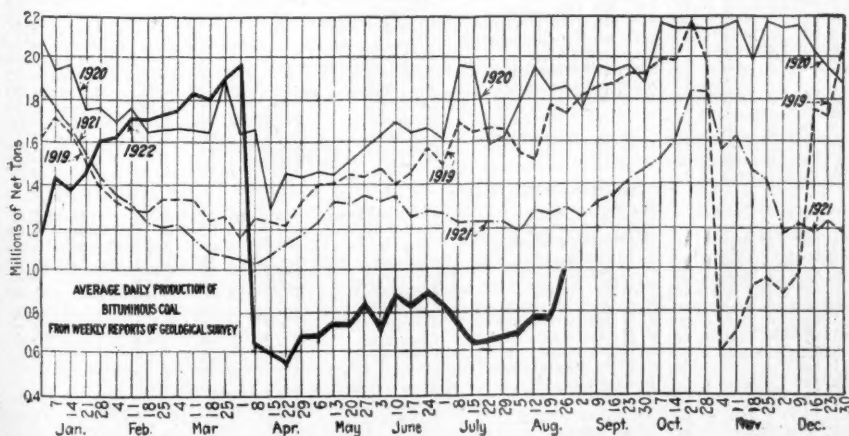
North Atlantic markets are easy. Heavier receipts via water and rail have taken the top off the market. British coals are flowing in, but are going at lower figures to meet domestic competition. There is little likelihood of a runaway market in New England. Re-



serves are comparatively heavy and buyers are banking on the steadily increasing production to lower their fuel costs. The railroad situation in this territory is well in hand and all-rail receipts are growing. Hampton Roads is in a priority tangle but shippers expect the situation to change for the better and that coal will soon resume its former course to contract consumers.

Federal price control and distribution of fuel by volunteer organizations ceased on Monday, pending the passage of emergency legislation by Congress. Until such action can be taken, price restraint is confined to the schedules declared by some of the states. The proposed legislation can apply only on interstate coal movements and without individual action by the states there can be no real control of profiteering.

Arrangements have been made to pool Lake coal as in 1920. The movement up the Lakes is increasing



Estimates of Production

(Net Tons)

BITUMINOUS

Week ended:	1921	1922
Aug. 5 (b).....	7,186,000	4,313,000
Aug. 12 (b).....	7,771,000	4,605,000
Aug. 19 (a).....	7,708,000	4,579,000
Daily average.....	1,285,000	763,000
Calendar year.....	247,394,000	216,794,000
Daily av. cal. yr.....	1,271,000	1,109,000

ANTHRACITE

Aug. 5.....	1,772,000	27,000
Aug. 12.....	1,772,000	29,000
Aug. 19 (a).....	1,529,000	39,000

COKE

Aug. 12.....	50,000	112,000
Aug. 19 (a).....	57,000	115,000
Calendar year.....	3,724,000	3,967,000

(a) Subject to revision. (b) Revised from last report.

and already the shortage fears of Northwestern consumers have been somewhat allayed.

All hope of any August resumption of hard-coal mining was blasted last week when the Philadelphia conference deadlocked. There is no surface indication of any early settlement and consumers are eagerly taking pea coal, the only size available, or are turning to substitutes such as coke.

BITUMINOUS

Additional production of mines opening up under the Cleveland agreement has caused a sharp upturn to the daily output as shown on the chart on the preceding page. According to the Geological Survey, an output of at least 6,000,000 tons for last week (Aug. 21-26) is assured by early reports, and additional tonnage from other districts that are known to have signed the agreement may raise the total to 6,250,000 tons.

On Monday mines in eastern Ohio and parts of central Pennsylvania were shipping coal, and the loadings for that day were 19,043 cars, an increase of 3,340 cars over the preceding Monday. Loadings on Tuesday declined somewhat but on Wednesday and Thursday increased again, and were greater than on corresponding days in any week during the strike. These increases were due to first shipments from Illinois and other Western districts, which carried the total up to 18,748 cars on Thursday.

DAILY LOADINGS DURING THE STRIKE

	1st week	12th week	17th week	18th week	19th week	20th week	21st week
Monday.....	11,445	15,311	13,267	15,102	16,229	15,703	19,043
Tuesday.....	11,019	16,622	11,571	11,446	13,729	13,032	17,772
Wednesday....	11,437	17,032	11,461	12,447	13,368	12,531	18,169
Thursday.....	11,090	16,432	11,028	12,380	13,277	13,521	18,784
Friday.....	11,296	16,073	11,142	12,669	13,539	13,718	
Saturday.....	8,868	13,993	11,336	12,405	11,009	13,524	

The increase came almost exclusively from mines formerly closed by the strike. In the middle and southern Appalachians transportation difficulties still limited output and shipments were but little larger than the week before.

It is not possible to estimate shipments from producing districts for the week ended Aug. 26, as there is at hand no measure of the coal output which has been produced from mines beginning production after Wednesday. The average shipments during the first half of last week exceeded the average for the preceding week by 33 per cent and that for June 19-24 by about 15 per cent.

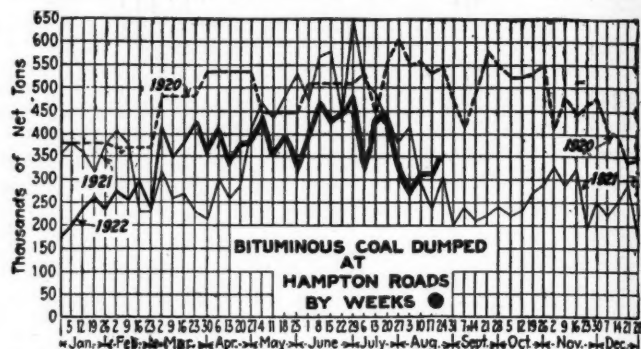
The increase in production is chiefly in central Pennsylvania, western Pennsylvania, the Fairmont and Panhandle

districts of West Virginia, and Ohio, in which districts, collectively, the daily rate of production exceeds by 156,000 tons, or 130 per cent, that of the week before. The increase in central Pennsylvania is about 90 per cent; in western Pennsylvania, 40 per cent; in northern West Virginia, about 170 per cent and in Ohio, 115 per cent.

The middle and southern Appalachian districts show slight change. The region as a whole is producing a little more than last week but has not again reached the level of production attained before the shopmen's strike. The eastern Kentucky districts are still greatly handicapped by traffic congestion. While production there increased about one-third it is still less than half of the quantity mined weekly during June.

Even with an output of 6,250,000 tons of bituminous coal a week, present production is still below normal. In the corresponding week of 1921 the country raised 9,640,000 tons of coal, of which 1,890,000 tons was anthracite and 7,750,000 tons bituminous coal. The year before that the total raised was 13,250,000 tons. In comparison with these figures the present weekly output of all coal, anthracite and bituminous, is from four to six million short of normal.

Tidewater dumpings at Hampton Roads increased to 350,537 net tons during the week ended Aug. 24 from 307,182 tons in the preceding week. The tonnage at the



piers is heavier and railroads are functioning better. Coastwise prices are somewhat softer, as receipts from other sources are more adequate at Northern points.

Michigan non-essential industries have been unable to obtain priorities for an adequate fuel supply. It is understood that Detroit consumers may form a pool and send buyers into the field in an endeavor to augment their receipts.

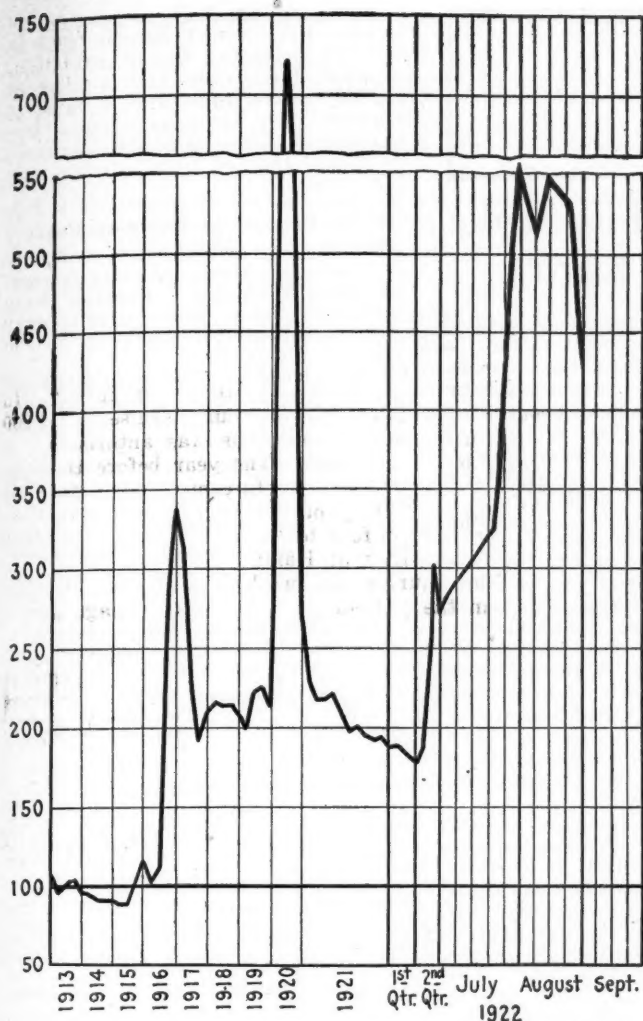
Current Quotations—Spot Prices, Bituminous Coal—Net Tons, F. O. B. Mines

		Market Quoted	July 31 1922	Aug. 14 1922	Aug. 21 1922	Aug. 28 1922†			Market Quoted	July 31 1922	Aug. 14 1922	Aug. 21 1922	Aug. 28 1922†
Low-Volatile, Eastern							Midwest						
Smokeless lump.....	Columbus...		\$8.50	\$6.15	\$6.10	\$4.00@58.50	Franklin, Ill. lump.....	Chicago.....					\$4.90@55.15
Smokeless mine run.....	Columbus...		8.15	5.75	6.00	4.00@7.50	Franklin, Ill. mine run.....	Chicago.....					4.50@4.75
Smokeless screenings.....	Columbus...		8.00	5.65	5.90	3.75@7.50	Franklin, Ill. screenings.....	Chicago.....					4.15@4.35
Smokeless lump.....	Chicago...		8.10	5.85	6.85	5.60@6.50	Central, Ill. lump.....	Chicago.....					4.90@5.25
Smokeless mine run.....	Chicago...		8.10	5.75	6.25	5.60@6.00	Central, Ill. mine run.....	Chicago.....					4.25@5.00
Smokeless lump.....	Cincinnati...		5.90	5.60	5.75	4.75@6.75	Central, Ill. screenings.....	Chicago.....					4.15@4.75
Smokeless mine run.....	Cincinnati...		5.50	5.50	5.50	4.50@6.00	Ind. 4th Vein lump.....	Chicago.....					5.00@5.50
Smokeless screenings.....	Cincinnati...		5.15	5.40	5.15	4.25@6.00	Ind. 4th Vein mine run.....	Chicago.....					4.65@5.00
*Smokeless mine run.....	Boston.....		8.15	10.15	8.70	7.50@10.50	Ind. 4th Vein screenings.....	Chicago.....					4.50@5.00
Clearfield mine run.....	Boston.....		6.00	8.00	7.60	5.60@6.25	Ind. 5th Vein lump.....	Chicago.....					4.90@5.25
Cambria mine run.....	Boston.....		6.65	9.00	8.75	5.60@7.00	Ind. 5th Vein mine run.....	Chicago.....					4.50@4.75
Somerset mine run.....	Boston.....		6.00	8.40	8.00	5.60@6.50	Ind. 5th Vein screenings.....	Chicago.....					4.25@4.50
Pool 9 (Super.Low Vol.)...	New York.....				8.00	6.00@6.75	Standard lump.....	St. Louis.....					3.75@4.00
Pool 9 (Super.Low Vol.)...	Philadelphia...		8.25	8.25	8.25	6.75@7.75	Standard mine run.....	St. Louis.....					3.25@3.50
Pool 9 (Super.Low Vol.)...	Baltimore.....		7.25	7.50		5.75@6.75	Standard screenings.....	St. Louis.....					2.75@3.00
Pool 10 (H.Gr.Low Vol.)...	New York.....			8.15	7.50	5.75@6.00	West Ky. lump.....	Louisville.....		7.25	6.35	6.00	4.50@5.50
Pool 10 (H.Gr.Low Vol.)...	Philadelphia...		8.00	8.00	8.00	6.50@7.50	West Ky. mine run.....	Louisville.....		7.25	6.25	6.00	4.50@5.50
Pool 10 (H.Gr.Low Vol.)...	Baltimore.....		7.25	7.50	7.75	5.75@6.00	West Ky. screenings.....	Louisville.....		7.25	6.15	6.00	4.50@5.50
Pool 11 (Low Vol.).....	New York.....		7.75	7.65	6.50	5.00@5.75	West Ky. lump.....	Chicago.....		7.60	7.15	6.00	3.50@5.00
Pool 11 (Low Vol.).....	Philadelphia...		8.00	7.85	7.75	6.00@7.00	West Ky. mine run.....	Chicago.....		7.60	7.10	6.00	3.50@5.00
Pool 11 (Low Vol.).....	Baltimore.....		7.75	7.10	7.75	5.85@6.75							
High-Volatile, Eastern							South and Southwest						
Pool 54-64 (Gas and St.)...	New York.....		7.75	7.60			Big Seam lump.....	Birmingham...		4.50	4.75	4.25	4.50@5.00
Pool 54-64 (Gas and St.)...	Philadelphia...		8.15	7.75	6.60	5.50@6.50	Big Seam mine run.....	Birmingham...		4.50	3.85	4.25	4.00@5.00
Pool 54-64 (Gas and St.)...	Baltimore.....		7.90	7.50	7.50	5.25@6.00	Big Seam (washed).....	Birmingham...		4.50	4.00	4.25	4.00@5.00
Kanawha lump.....	Columbus...		8.00	5.90	6.40	4.00@8.00	S. E. Ky. lump.....	Chicago.....		8.00	5.85	6.15	3.50@6.01
Kanawha mine run.....	Columbus...		7.75	5.50	6.25	3.75@7.50	S. E. Ky. mine run.....	Chicago.....		8.00	5.75	6.00	3.50@6.01
Kanawha screenings.....	Columbus...		7.75	5.40	6.00	3.60@7.50	S. E. Ky. lump.....	Louisville.....		7.75	5.85	5.90	4.50@6.00
W. Va. Splint lump.....	Cincinnati...		6.40	5.60	5.35	4.75@6.00	S. E. Ky. mine run.....	Louisville.....		7.75	5.75	5.75	4.50@5.75
W. Va. Gas lump.....	Cincinnati...		6.40	5.60	5.35	4.75@6.00	S. E. Ky. screenings.....	Louisville.....		7.60	5.60	5.65	4.50@5.00
W. Va. mine run.....	Cincinnati...		6.00	5.50	5.50	4.60@5.50	S. E. Ky. lump.....	Cincinnati...		7.75	5.60	5.90	4.75@6.00
W. Va. screenings.....	Cincinnati...		5.90	5.40	5.10	4.25@5.50	S. E. Ky. mine run.....	Cincinnati...		6.00	5.50	5.75	4.50@6.00
Hocking lump.....	Columbus...		8.15	6.15	6.65	4.00@8.00	S. E. Ky. screenings.....	Cincinnati...		5.90	5.35	5.10	4.25@5.50
Hocking mine run.....	Columbus...		7.75	5.75	6.25	4.00@7.75	Kansas lump.....	Kansas City...		5.00	6.00		6.00
Hocking screenings.....	Columbus...		7.75	5.35	5.75	3.75@7.50	Kansas mine run.....	Kansas City...		4.75	6.00		5.00
Pitts. No. 8 lump.....	Cleveland...		8.50	7.25	6.10	5.50@6.00	Kansas screenings.....	Kansas City...		4.25	6.00		2.75@3.00
Pitts. No. 8 mine run.....	Cleveland...		8.50	7.25	6.10	5.00@5.50							
Pitts. No. 8 screenings.....	Cleveland...		8.50	7.25	6.10	5.00@5.50							

*Gross tons, f.o.b. vessel, Hampton Roads.

†Advances over previous week shown in heavy type, declines in italics.

NOTE—Smokeless prices now include New River and Pocahontas.



Coal Age Index 437, Week of Aug. 28, 1922. Average spot price for same period \$5.29. This diagram shows the relative, not the actual prices on fourteen coals, representative of nearly 90 per cent of the total output of the United States, weighted in accordance first with respect to the proportions each of slack, prepared and run-of-mine normally shipped and second, with respect to the tonnage of each normally produced. The average thus obtained was compared with the average for the twelve months ended June, 1914, as 100, after the manner adopted in the report on "Prices of Coal and Coke, 1913-1918," published by the Geological Survey and the War Industries Board. (Pittsburgh District prices not included in figures for last week.)

Lake dumpings reflect the governmental activities in behalf of the Northwest. During the week ended Aug. 28 the lower ports handled 253,024 net tons—223,361 tons cargo and 29,663 tons vessel fuel—as compared with 176,640 tons in the previous week. The season's dumpings to date are 5,208,479 tons; in 1921 they were approximately 16,000,000 tons. The Northwestern docks are bare of coal and are eagerly awaiting the arrival of these cargoes. From Aug. 1 to 15 the reserve of bituminous coal dropped from 661,000 to 303,000 tons, and of anthracite, from 170,000 to 92,000 tons. A year ago, when stocks were above the average, the dock operators had on hand between 5,000,000 and 6,000,000 tons of bituminous coal and about 600,000 tons of anthracite.

ANTHRACITE

Production remains at a standstill. The Philadelphia conference of miners and operators, while deadlocked, is still the center of interest and hope persists that an early settlement may be effected, although there are no indications of it at this writing. River coals continued to be dredged at the rate of 39,000 net tons during the week ended Aug. 19.

Pea coal is about all that is moving, either from mine storage or retail yards. Consumers are eagerly accepting this, as they realize the seriousness of the situation. About two weeks more will see the exhaustion of the companies' reserves of this size. North Atlantic centers are urging

How the Coal Fields Are Working

Percentages of full-time operation of bituminous coal mines, by fields, as reported by the U. S. Geological Survey in Table V of the Weekly Report.

	Six Months July to Dec. 1921	Jan. 1 to Apr. 1, 1922 inclusive	April 3 to Aug. 12, 1922 inclusive	Week Ended Aug. 12
U. S. Total.....	45.6	55.7		
<i>Non-Union</i>				
Alabama.....	63.5	64.6	77.9	53.3
Somerset County.....	55.5	74.9	45.7	54.4
Panhandle, W. Va.....	55.3	51.3	44.6	48.5
Westmoreland.....	54.9	58.8	83.8	86.9
Virginia.....	54.8	59.9	74.4	59.6
Harlan.....	53.3	54.8	No report	
Hazard.....	51.7	58.4	49.1	23.0
Pocahontas.....	49.8	60.0	68.9	58.4
Tug River.....	48.1	63.7	73.2	57.3
Logan.....	47.6	61.1	60.8	32.6
Cumberland-Piedmont.....	46.6	50.6	17.8	26.4
Winding Gulf.....	45.7	64.3	62.9	22.8
Kenova-Thacker.....	38.2	54.3	71.3	55.6
N. E. Kentucky.....	32.9	47.7	No report	
New River.....	24.3	37.9	30.1	33.0
<i>Union</i>				
Oklahoma.....	63.9	59.6	14.4	14.8
Iowa.....	57.4	78.4	0.0	0.0
Ohio, Eastern.....	52.6	46.6	0.0	0.0
Missouri.....	50.7	66.8	2.7	6.0
Illinois.....	44.8	54.5	0.0	0.0
Kansas.....	42.0	54.9	16.5	13.4
Indiana.....	41.4	53.8	0.0	0.0
Pittsburgh†.....	41.2	39.8	0.0	0.0
Central Pennsylvania.....	39.1	50.2	11.9	13.6
Fairmont.....	35.3	44.0	4.4	7.0
Western Kentucky.....	32.5	37.7	61.5	54.3
Pittsburgh*.....	30.4	31.9	0.0	0.0
Kanawha.....	26.0	13.0	6.2	11.3
Ohio, Southern.....	22.9	24.3	0.0	0.0

*Rail and river mines combined.

†Rail mines.

‡Union in 1921, non-union in 1922.

Car Loadings and Surpluses

Cars loaded:	All Cars	Coal Cars
Week ended Aug. 12.....	852,580	84,559
Previous week.....	851,351	79,246
Same week a year ago.....	808,269	156,891
Surplus cars:		
Aug. 8, 1922.....	153,880	118,044
July 31, 1922.....	174,927	131,267
Same date a year ago.....	297,784	152,774

the use of coke or bituminous coal as substitute for anthracite and New York City has taken steps to abolish temporarily the smoke ordinance prohibiting the use of bituminous coal.

COKE

Beehive coke production increases slowly. The output for the week ended Aug. 19 was 115,000 net tons, as compared with 112,000 tons in the week preceding. Demand wanes however, as coke buyers adopt the same waiting tactics as those in the coal market. Prices are softer but are still too high to warrant the operation of blast furnaces.

In the Connellsville region the H. C. Frick Coke Co., subsidiary of the U. S. Steel Corporation, has posted notices of an increase in the scale, offering a return to 1920 wages—the highest on record. The notice provides for an open-shop basis of work and while organizers are attempting to hold the union ranks firm it is now expected that the strikes will wane rapidly.

Kentucky Governor Drafts County Judges to Help Enforce Fair-Price Regulations

In anticipation of an early termination of the railroad strike, Governor Edwin P. Morrow of Kentucky has perfected an organization to prevent profiteering in coal in that state. The Governor has appointed every County Judge in the state a member of his Fuel Distributing Committee and sent letters requesting each one to inform him promptly of any individual paying more than \$4.50 a ton in carload lots and of any local dealer charging more than a fair price. He also will write to chambers of commerce and boards of trade requesting them to advise him of any manufacturing plant or public utility which is charged more than \$4.50 a ton at the mines.

"I intend," Mr. Morrow said, "to enforce the regulations by the fullest publicity and also by refusal of priority orders by withholding cars from operators who charge more than the Hoover price and by withholding priority orders from local dealers who profiteer. The cars will go to the dealers who charge fair prices."

Foreign Market And Export News

British Hold European Orders to Fill Strike Gap; Exports Equal Pre-War Record

British exports are still equaling pre-war records. The pressure at the ports is acute as emergency tonnage is being rushed to North America. European orders are strong but tonnage is being diverted to fill the gap made by the strike in the United States. With the exception of Best Admiralty large, however, export prices are showing softening tendencies. Production during the week ended Aug. 12 was 3,623,000 gross tons, according to a cable to *Coal Age*, the sharp curtailment being due to holiday interruptions.

So far no agreement has been reached on the question of trimmers working three shifts instead of two so as to relieve congestion at the British coal shipping ports. The operators and shippers have asked the unions to work three shifts so as to be able to employ more trimmers and also to permit of greater coal output, thus giving more employment to more miners.

Welsh coal fields are now operating at top pressure. Orders from the United States and Canada continue to arrive and a conservative estimate shows that Wales, at any rate, will continue at top speed well into October even if no further orders are forthcoming.

As a result of the American demand steam coal prices are strong but the best Admiralty coal is not above 30s. with other varieties in proportion. As a rule the colliery operators in Wales are taking the long view of the present revival, in that they are endeavoring to prevent undue inflation of prices.

Practically the same position is found in northern England. American and Canadian inquiries continue to arrive and the pits are operating at top pressure. At present, however, the north of England pits are finding difficulties in getting their coal shipped owing to the congestion at Newcastle.

French Mine Costs Still Too High

The French market is moderately active, but, with the huge mine stocks still existing and an increasing output

from the gradually restored devastated mines, no true improvement of the situation is to be hoped for before a reduction in costs permits French collieries of the Nord and Pas-de-Calais to meet British competition. The difficulty of this task will be fully grasped if it is considered that, while their wages are three times higher than before the war, French workers are now individually mining 20 per cent less coal.

The miners are now said to be in a rather conciliatory mood. It is therefore to be hoped that they will voluntarily agree to extend their effective underground working time from 6½ hr. to 7½ hr. and thus enable the collieries to effect a saving of at least 10 frs. per ton of coal mined. Already now, collieries of the Nord and Pas-de-Calais are accepting forward contracts with a clause providing for an eventual revision of the selling price.

Germany, who was under an obligation of supplying to France, Luxembourg, Belgium and Italy a monthly quantity of 1,916,000 tons had asked the Commission of Reparations, under the fallacious pretext that she was importing coal from Great Britain, to reduce this quantity to 1,340,000 tons. The commission decided that from August to October Germany will have to deliver to these four countries a monthly quantity of 1,725,000 tons.

Coal Paragraphs from Foreign Lands

ITALY.—The price of Cardiff steam first is still quoted at 42s. 3d., according to a cable to *Coal Age*, unchanged from last week.

GERMANY.—Production in the Ruhr district for the week ended Aug. 12 was 1,778,000 metric tons, according to a cable to *Coal Age*. The preceding week's output was 1,731,000 tons. Miners are demanding an increase of wages amounting to 130 to 140 marks a shift.

SWITZERLAND.—British supplies of coal, which constituted 15 per cent in 1920 and 19 per cent in 1921 of the total coal imports of the country, are falling

off, owing to the keen competition of German, French and Belgian coal on the Swiss markets. Out of a total importation during the first quarter of 1922 of 266,000 tons with a value of 20,000,000 fr., Germany's share was 108,000 tons, France's 56,000, Belgium's 55,000 and that of Great Britain only 31,000 tons.

Better Receipts at Hampton Roads

Business was more brisk at Hampton Roads last week, all piers increasing their dumpings. Supplies were slightly increased, due to a temporary improvement in transportation on the Virginian and N. & W.

Prices showed a downward tendency, due to reports that larger supplies were being received at Northern points. Demand remained strong, however.

The outlook was somewhat more encouraging, although dealers did not hope for much relief from the stringency in the near future. Railroads were holding their own in coal movement, all reporting a slight improvement in condition of their equipment.

Hampton Roads Pier Situation

—Week Ended—
Aug. 17 Aug. 24

N. & W. Piers, Lamberts Point:			
Cars on hand.....	1,196	1,419	
Tons on hand.....	64,710	76,031	
Tons dumped for week.....	138,371	169,922	
Tonnage waiting.....	101,375	80,175	

Virginian Ry. Piers, Sewalls Point:			
Cars on hand.....	502	722	
Tons on hand.....	30,150	41,800	
Tons dumped for week.....	53,065	70,155	
Tonnage waiting.....	59,663	53,400	

C. & O. Piers, Newport News:			
Cars on hand.....	323	280	
Tons on hand.....	16,150	14,000	
Tons dumped for week.....	82,334	72,903	
Tonnage waiting.....	28,615	35,295	

Pier and Bunker Prices, Gross Tons

		PIERS	
		Aug. 19	Aug. 26†
Pool 10, Philadelphia.....	\$11.50@12.00	\$10.50@11.00	
Pool 11, Philadelphia.....	10.75@11.25	9.75@10.25	
Pool 10, New York.....	12.00@12.25		
Pool 11, New York.....	11.00@12.00	10.00@11.00	
Pool 1, Hamp. Roads.....	9.50@10.50	7.50@10.00	
Pools 5-6-7 Hamp. Rds.....	9.50@10.50	7.50@10.00	
Pool 2, Hamp. Rds.....	9.50@10.50	7.50@10.00	

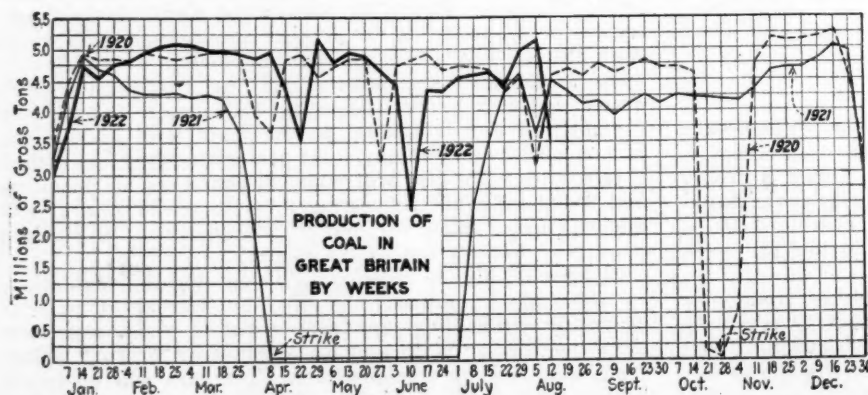
		BUNKERS	
Pool 10, Philadelphia.....	\$11.75@12.25	\$10.75@11.25	
Pool 11, Philadelphia.....	11.00@11.50	10.00@10.50	
Pool 10, New York.....	12.25@12.50		
Pool 11, New York.....	11.25@12.25	10.30@11.30	
Pool 1, Hamp. Rds.....	9.50@10.50	7.50@10.00	
Pool 2, Hamp. Rds.....	9.50@10.50	7.50@10.00	
Welsh, Gibraltar.....	40s. 6d. f.o.b.	40s. 6d. f.o.b.	
Welsh, Rio de Janeiro.....	57s. 6d. f.o.b.	57s. 6d. f.o.b.	
Welsh, Lisbon.....	43s. f.o.b.	43s. f.o.b.	
Welsh, La Plata.....	50s. f.o.b.	50s. f.o.b.	
Welsh, Genoa.....	42s. t.i.b.	42s. t.i.b.	
Welsh, Algiers.....	38s. f.o.b.	38s. f.o.b.	
Welsh, Pernambuco.....	65s. f.o.b.	65s. f.o.b.	
Welsh, Bahia.....	65s. f.o.b.	65s. f.o.b.	
Welsh, Madeira.....	43s. f.a.s.	43s. f.a.s.	
Welsh, Teneriffe.....	41s. f.a.s.	41s. f.a.s.	
Welsh, Malta.....	44s. 6d. f.o.b.	44s. 6d. f.o.b.	
Welsh, Las Palmas.....	41s. f.a.s.	41s. f.a.s.	
Welsh, Naples.....	42s. f.o.b.	42s. f.o.b.	
Welsh, Rosario.....	52s. 6d. f.o.b.	52s. 6d. f.o.b.	
Welsh, Singapore.....	52s. 6d. t.i.b.	52s. 6d. t.i.b.	
Welsh, Constantinople.....	50s. f.o.b.	50s. f.o.b.	
Welsh, St. Michaels.....	50s. t.i.b.	50s. t.i.b.	
Welsh, Alexandria.....	44s. f.o.b.	42s. f.o.b.	
Welsh, Port Said.....	49s. f.o.b.	49s. f.o.b.	
Welsh, Buenos Aires.....	50s. f.o.b.	50s. f.o.b.	
Durham, Antwerp.....	30s. 6d. t.i.b.	30s. 6d. t.i.b.	
Durham, Hamburg.....	26s. f.o.b.	26s. f.o.b.	

Current Quotations British Coal f.o.b. Port, Gross Tons

Foreign Quotations by Cable to Coal Age

		Aug. 19	Aug. 26†
Cardiff:			
Admiralty, large.....	30s. @ 32s. 6d.	31s. @ 32s. 6d.	
Steam, smalls.....	22s. @ 22s. 6d.	22s. @ 22s. 6d.	
Newcastle:			
Best steams.....	25s. @ 26s.	25s. @ 26s.	
Best gas.....	25s.	24s. @ 25s.	
Best bunkers.....	25s.	23s. 6s. @ 24s. 6d.	

†Advances over previous week shown in heavy type; declines in italics.



North Atlantic

Consumers Seek Bargains As Coal Prices Recede

Offerings More Plentiful — Though Users' Stocks Are Low, Shipping Prices Tempt Buyers to Delay Further — Resumption of Buying Not Far Distant.

Buyers are hunting coal bargains as spot prices slip. Offerings are increasing as production has improved in the fields resuming under the Cleveland agreement. Priorities have taken a goodly tonnage but the remaining spot coal is not being snapped up as eagerly as before. Consumers' supplies are dangerously low but buyers have gone on a hand-to-mouth basis for so long that they are inclined to take a further chance and are delaying replenishing their stocks as prices slip gradually downward.

As soon as the buyer is satisfied that the improvement in production is permanent he is bound to enter the market and this buying rush is certain to stimulate staggering prices.

NEW YORK

The market was on an up and down basis last week. Quotations as well as demand changed frequently. Selling figures are gradually getting down to normal and buyers are bargain hunters.

The failure to bring about a settlement of the railroad difficulty caused some uneasiness but it was not believed there would be any serious delay in shipments. Continued idleness in the anthracite mines has already created increased demand for bituminous and with the suspension of the Board of Health law prohibiting the use of bituminous in this city still greater will be the demand.

During the last seven days there were nearly 125,000 tons of British coal reported as having arrived in this port in 22 vessels. Demand for foreign coals receded somewhat during the latter part of the week. Quotations for British Admiralty coals were around 42s.

Southern coals came forward in good volume. There was considerable free coal here at the end of the week, quotations ranging \$11@12, New York harbor.

Local users are satisfied they will be able to get coal at much lower than current prices. There were 558 cars at the local piers on Aug. 25 an increase of 158 cars over Aug. 21. Most of this consisted of Pool 11 quality.

Quotations for mine shipments were lower than on the Tidewater basis. Industries included in Class 2 of the priority orders were given quotations

from \$5 up on Morgantown district B. & O. coals. B. R. & P. coals were quoted around \$5.50, with Ligonier and Latrobe coals holding about the same range. High-volatiles were quoted \$5.50@\$5.75 and Pittsburgh steam coals, Pool No. 34 quality, around \$5.50.

FAIRMONT

A number of companies having signed the Cleveland agreement, northern West Virginia is partly unionized, but open-shop mines in operation greatly exceed the union mines in number. Naturally production has increased, but the bulk of the output during the week ending Aug. 19 was coming from non-union mines, most of which are adhering to the operating policy pursued during recent months. Much of the coal is going to the railroads, the open market price ranging \$4.50@\$6.50 a ton.

PHILADELPHIA

There has been a little freer offering of spot coal recently, but it seems that the more coal available for the market the less anxious the consumer is to buy. The cry all around is for lower prices, and each successive drop recently only seems to have encouraged the consumer to hold off longer.

Frequent reports are heard of small operators signing up on the basis of the Cleveland scale and the number accepting grows each day. However, it is a foregone conclusion that the big concerns who always operated non-union, will continue to do so.

Prices have fallen close to an average of a dollar all around and even lower figures are looked for, yet there is also a likelihood that there will be a considerable rebound. There is not the least doubt that the moment the consumer is convinced that mining has resumed at a greatly improved degree there will be a rush into the market, with only one result—increased prices.

Foreign coal is now arriving almost daily. Inasmuch as there have been some sharp price recessions in domestic fuels this has had the effect of slowing down orders for overseas fuel. In addition there is also a fair tonnage of Southern coal coming in, and many of the barges formerly in the anthracite trade are now being used for Southern loadings.

CENTRAL PENNSYLVANIA

As far as the union mines in central Pennsylvania are concerned, the strike is at an end for the present. Influenced by the settlement, prices have sagged. Spot quotations are \$5@\$6, but it is expected that the price will soon reach the fair-price level of \$4.50 established by the Fuel Commission, and competition, as mining progresses, should bring it to the figure prevailing prior to April 1.

Before leaving Altoona following the agreement with the union operators, President Brophy declared that the entire force of the union will be concentrated on the fields remaining out of the organization.

Production in the non-union districts

has steadily increased, the peak being reached last week, when 1,026 cars were loaded in one day. It is apparent that the union has a task before it, as the non-union fields are mostly paying a higher rate than the agreement with the union calls for.

BALTIMORE

With the increased production of soft coal prices have fallen off so that at this writing gas and steam coals are in the market at prices ranging \$5.75@\$6 a net ton f.o.b. mines. These prices apply in the majority of cases to both priority and other sales.

There is talk of the Hoover price of \$4.50 but in most cases this is not an active binding figure even for priority selling. The demand from consumers, at least that kind of demand which was willing to pay up to \$8 for quick deliveries, fell off rapidly with the reopening of the mines in the Cleveland agreement.

The question of profit-limiting is the principal one now agitating the Maryland Coal Commission and the solution has apparently not been found through the conference so far held with official Washington. In sales for domestic use, especially, there is great difficulty in arranging a price, as the cost of handling varies greatly.

UPPER POTOMAC

All but about 15 plants are now in operation and production is increasing daily. All the mines are running open-shop, the owners having refused to sign with the union though paying the 1920 wage scale. The tonnage now being handled by the Western Maryland is larger than at any time in recent months. There continues to be a strong demand from eastern markets, prices ranging \$4.50@\$7 a ton.

West

SALT LAKE CITY

Operators are still behind on their orders but prices have not increased. The car situation is satisfactory. A few more men have gone to work at the mines and production is holding up well. The strike situation is unchanged.

Prominent operators at Ogden, who have mines in Wyoming, have left for Rock Springs where they will be present at a meeting to consider the question of reopening the mines in that state.

KANSAS CITY

In spite of the settlement Aug. 23 of the strike in the Southwest field, the outlook for both operators and miners is poor. Competition of the strongest kind from Illinois coal on the East and Colorado coal on the West and with fuel oil from all directions will cut heavily into the business. Car shortage, predicted to set in about the middle of September, may interfere with the flow of Illinois and Western coal, but it will not greatly hamper oil which already has established itself well both locally and throughout the South, which is counted on normally to absorb about all the slack coal shipped from Kansas and Oklahoma fields.

A little new Kansas coal reached Kansas City by Saturday and was quoted as follows: Lump, \$6; nut, \$6. mine run, \$5; slack \$2.50@\$3.

Anthracite

Substitutes Sought as Hard-Coal Famine Looms

**Coke Being Used and British Coal May
Be Pressed Into Domestic Service—
Depletion of Pea Stocks in Sight—
Stimulus to Output of River Barley.**

Hope of any August resumption of anthracite mining has been blasted by the deadlocked Philadelphia conference. In the meantime the retail situation is being given much publicity by the daily press and all consumers now realize the gravity of the fuel outlook for this winter.

Coke is being substituted as an emergency fuel. There is some talk of using British coal for domestic purposes along the North Atlantic seaboard. Pea coal is still actively moving out, both at retail and from the mines, but at the present rate of distribution two weeks will see mine storage piles of this size fairly depleted. Production of river barley is stimulated by the steam shortage.

As it becomes certain that anthracite will be impossible to procure at the start of the winter, steps are being taken by New York City authorities to abolish the ordinance prohibiting the use of bituminous coal.

PHILADELPHIA

Just as everyone had begun to be hopeful that there would be some anthracite production in August, the miners and operators came to a deadlock, with absolutely no sign of their resuming negotiations.

Receipts of pea coal by the retailers have been up to the tonnage of the last few weeks, and it is believed that the next two weeks will see the entire exhaustion of the companies' storage piles. Consumers of all classes are now eagerly seeking this size, as it is the only coal now left on the market.

Dealers are fully convinced that they will have to handle bituminous coal this winter in order to serve the people, and in the meantime are seeking sized coke. They have found that the market is already sold up, as much of the product is going to iron furnaces. Their only hope in case of stress would be by the fuel commission ordering this fuel into domestic use.

One of the coal associations, in order to assist in the equitable distribution of such coal as comes to market, has suggested some rules to the fuel commission, as follows: The maximum gross profit on retail sales not to be in excess of that in March, 1922; delivery to consumers to be limited to 60 days' supply; operators shall not make sales

to other than retail dealers; the commission shall do all possible to have coal kept up to the standard of preparation.

NEW YORK

The seriousness of the situation is being realized more each day. Hard coal is becoming scarcer and bituminous is being recommended for use as a substitute by the state fuel administrator. Since the breaking off of negotiations between the mine owners and workers the Board of Aldermen of this city has asked the Board of Health to suspend the ordinance prohibiting the use of bituminous coal in the city. Leave also has been asked of the State Legislature to issue bonds which will enable the city to go into the coal business.

There is little hard coal about the retail yards and none being offered for sale by producers and wholesale houses. Whatever of the larger sizes there are to be had are being doled out in small lots by retail dealers. Order books are filled and it is apparent that those house owners whose bins are empty are likely to have some sleepless nights soon.

About the only anthracite available is river barley, which is being offered in small lots. Quotations range \$2.50 @ \$4 at the point of loading.

BOSTON

The retail price on pea has been lifted in Boston to \$15 per net ton, sidewalk delivery. Prices on larger sizes are only nominal, no dealer having more than a very small quantity on hand.

Stray lots of pea are still coming forward from a few producers. The tonnage available, however, is very much reduced and several of the larger companies will have practically none in stock when mining is resumed.

BALTIMORE

Dealers are keeping one eye on the possibility of a settlement of the anthracite trouble, although they are not so much impressed with the thought that the government will actually operate anthracite mines, and the other on the class of distribution which they will undertake as an emergency pending the first receipts of hard coal. In this latter connection some will avail themselves of the domestic soft coal which is now offering, while others will take supplies of the English coal already in port.

In 1902 some English coal brought to this port in ballast was sold to local consumers at a price of \$11, as a relief from the anthracite strike conditions at this time. A price of \$13.50 at this time would certainly be considered conservative. Some tests of samples of the coal just brought in, a Welsh product, show that it burns with a good flame and with very little smoke or residue. Hard coal dealers, however, predict that as soon as an-

thracite begins to run again the demand for even the best kinds of soft coal for household use will come to an end.

BUFFALO

With the failure of the operators and the union authorities to arrive at an understanding all hope of a coal supply right away or of a sufficient output for the winter disappeared. The question now is what will answer as a substitute.

It is believed that natural gas will be in much larger supply than during the past few years. Still the problem is not an easy one. This city has about 110,000 families living in single houses to four family flats, of which it is estimated that 75,000 have no coal of account.

Meanwhile an enterprising Scranton coal man sends in an offer of coal "as soon as mined" at \$17.50 for stove and chestnut, \$10 for pea and \$12.50 for washery, to which add \$3.28 for freight.

South

BIRMINGHAM

Though the market is not as active as a week ago, business being offered is more than sufficient to take the comparatively small amount of free coal that is to be had. Inquiry from Western points has fallen off with the resumption of operations at mines in the union fields and other districts on the verge of strike settlements. The demand for industrial and utility use is good. The railroads and other contract consumers are taking the bulk of the output and the larger companies have little or no free coal to offer on the market.

Pressure has not been sufficiently relieved to restore differentials as to quality and preparation, and mine run and washed steam is selling at \$4@ \$5 per ton mines, while spot domestic is reported around \$5 and hard to obtain at this figure.

Mines on the Southern Ry. especially have suffered serious delays the past week account of shortage of cars, operations losing all the way from a few hours to as much as two days in the week. Conditions in this respect are not as bad on other lines, but all lines are short on coal-carrying equipment. Production for the week of Aug. 12 was approximately 390,000 net tons. Withdrawal of a large amount of equipment from foreign lines which have been taking coal in this district for some weeks pending the settlement of the strike, has been seriously felt.

VIRGINIA

Mines have not been able to reach higher than 60 per cent of potential capacity owing to lack of adequate transportation facilities, production not being above 150,000 tons a week. That section of the field served by the Norfolk & Western is producing about 75 per cent of capacity. C. & O. mines are producing at the rate of 64 per cent. Coke production remains at about 4,500 tons a week. Prices are on approximately the same level, with much of the output moving under contract. One hundred out of the 115 mines in this territory are in operation.

Chicago and Midwest

No Joyous Welcome for Fresh Midwestern Coals

Many Spot Buyers Withdraw from Market Hoping Prices, Now Seeking a Firm Level, Will Drop—Illinois Mines Reach 30 Per Cent Production.

If anybody expected the Midwestern market to get out the band and the town "hack" to welcome the return of Illinois and Indiana coal, they were disillusioned before the mines of the states had been producing four days following the end of the strike. Efforts to feel out the market at \$6 were coldly received after the first day and by the fourth the recession in price had drawn quotations below \$5. Steam demand was light except among railroads. In the markets the main interest was in prepared sizes. Steady customers in the retail trade got most of the first coal shipped. This situation is expected to reverse itself after a few days when it is definitely determined what the bottom price is to be.

A good deal of coal from Kentucky, en route for Midwest markets was caught by the end of the strike and is selling as low as \$3.50. At certain Illinois mines, there were no bills on the track the second day of operation.

INDIANAPOLIS

With the resumption of operations in Indiana, the retailer has come into the market and he wants coal badly. Prices show no change at the mines outside of Indiana.

The coal executive board of the state administration is arguing for a \$3.50-price at the mines. Most of the operators believe when quotations are finally made, the price will be more nearly \$4, at least for the time being. The governor, however, has authorized the payment of \$5 for coal provided on a guarantee to the state institutions.

It is generally believed by operators in Indianapolis that a four day a week program will be all that will be permitted because of the rail situation. The rail officials here say they can provide cars for every pound of coal the operators produce, but as one aptly put it, "they never have."

WESTERN KENTUCKY

Although demand has slumped a little as a result of production starting north of the Ohio, and the Chicago market is weak and only bidding about \$4.50@ \$4.75 for western Kentucky coal, it is claimed that the field will continue as busy as car supply will permit, as priority orders are taking production

just now, and there is the great demand to be supplied through the retailers, and restocking of industries, etc., along with railroads, before any let-up is in prospect. Prices are working down to around the allowed figure of \$4.50 a ton, but may remain firm at \$4.50 @ \$5, which will also cover brokerage in the latter instance.

Whether Chicago, Detroit and other Northern markets continue buying in large quantities or not will not make much difference for the time being, as St. Louis, Louisville, Nashville, Memphis and many other towns are needing considerable tonnage, and retailers do not expect to accumulate much stock.

LOUISVILLE

During the week prices have worked lower until there is but little coal quoted at more than \$5@ \$5.25 for any size, from any Kentucky field. The allowed price of \$4.50 a ton is being approximated at last. But it is reported that some producers are passing their coal through brokers, so that the latter may have an opportunity to collect their 8 per cent brokerage.

There are rumors to the effect that some producers are billing their output through newly organized brokerage offices, producer owned at the \$4.50 maximum, thus keeping their own records clear while these subsidiaries rake in big profits.

It is feared that an already poor car supply to Kentucky will become worse now that Northern fields are producing again.

SOUTHERN ILLINOIS

Nearly every mine in the Cartersville district started to work on Aug. 23. Some of them did not get any coal, however. Those mines that did not open began cleaning up preparatory to starting.

When it became known that Illinois had signed up there were parades in the mining camps all over southern Illinois, especially at West Frankfort and all Franklin County towns. There was general rejoicing everywhere, for the miners, it now develops, were practically convinced they were going to have a freezeout this winter.

Somewhat similar conditions prevailed in the Duquoin and Jackson County fields, with the exception that several of the smaller mines are not ready to open up. In the Mt. Olive district coal was produced the first day, but no shipments made.

Railroad buying was easy in the Standard and Mt. Olive fields, practically no railroad coal being loaded except that on overlapping contracts.

The Cartersville prices seem to range about \$5@ \$5.50 for domestic sizes, including No. 1, 2 and 3 washed. No. 4 washed is \$4.75, No. 5, \$3.90, 2-in. screenings, \$4.50, 1 1/2-in. screenings, \$4.35 and mine run, \$4.65. Railroad coal seems to range \$3.50@ \$4 for mine run on contracts.

Mt. Olive shipments to the country and Chicago range about \$5 on domestic sizes down to \$4.50 on steam. St. Louis prices on Mt. Olive domestic are

\$4.50 down to \$4.25 on steam. Big Muddy and Murphysboro ranged around \$6 for everything at the start. Standard opened up at \$6 for lump and down to \$5 for mine run, but this rapidly declined until the latter part of the week saw coal moving as low as \$2.75 for screenings, \$3 for mine run and \$4 for prepared sizes.

CHICAGO

No liveliness of markets here followed the resumption of coal mining in Illinois and Indiana. Spot buyers appeared to withdraw with the expectation that if they stayed out for a few days coal would be down to \$2.50. As it was, Illinois coal opened here at a little above \$5 but did not move in any quantity at prices above \$5 for lump, \$4.50 for mine run and \$4.25 for screenings, with the bulk of the demand for domestic.

Indiana coals were offered at figures above the Illinois levels. In the price jugglery which is now going on and may continue for a week or more until a firm level is reached, it is natural to suppose that most Indiana coal will drop below that from well-known Illinois fields. A good deal of Kentucky coal on the way here was caught short by the end of the strike, so that quotations on it dropped suddenly from around \$6 the day of the settlement to less than \$5. Very little smokeless coal reaches here.

ST. LOUIS

The end of the coal strike was not as hilarious an affair as might be expected in St. Louis. All buyers seem to figure that they have an unlimited quantity of Kentucky and Alabama coal in transit that is going to drag on for the next three weeks. As a result they are not in the market for Illinois coal. There seems to have been some sort of a well-formed plan not to buy Illinois coal when the mines started up, although the day before they started up these same buyers were paying \$7@ \$8 for Kentucky coal. The result is that the Illinois Standard market is pretty well broken up and quotations range from \$4 down to \$2.75 and shipments are being diverted to the north. The same is true of Mt. Olive. On such Cartersville as is coming in the price is being paid, but the tonnage is light.

The St. Louis fuel committee has ceased to function, but the State fuel commission will continue to keep in touch with the situation. A meeting was held in St. Louis on Aug. 24 in regard to this and it was decided to let the operators and the railroads take care of the situation until it developed that they were unable to cope with it.

Canada

TORONTO

Fuel Controller Ellis strongly advises coal dealers to purchase Welsh coal, but so far there has been no move in that direction. Dealers profess to believe that plenty of anthracite will be available before winter, though the Controller is of the contrary opinion. J. Sanderson, representing the Europe & Asia Trading Co., is in Toronto with the object of opening up a market for British coal. He states that his company could supply the needs of a large city and has at present over 100,000 tons ready for shipment from Cardiff.

Eastern Inland

Output of Resuming Mines Hampered by Car Shortage

Large Consumers Now Buying, Smaller Users Holding Back for Lower Quotations—Shrinkage in Demand Softens Prices—Closing of Ford Plants Important Market Factor.

No. 8 operations have cleaned up and are resuming work under the Cleveland agreement. Production is seriously hampered, however, by a car shortage on the B. & O. and W. & L. E. railroads. The major portion of the output is going to the railroads, steel plants and other large users. Smaller consumers are awaiting lower prices, and the recession in demand has caused a softening, temporarily at least. The announced intention of Henry Ford to close down his plants Sept. 16 will have a pronounced effect on the market.

Ohio operators have refused to enter a state conference on price regulation, fearing the federal law on the subject.

PITTSBURGH

Operators now offer the men the 1920 scale, without union recognition or the check-off, and the men show little disposition to accept. The common belief is that the Pittsburgh Coal Co. will hold out indefinitely, but there is doubt as to some of the smaller operators. Published reports of Pittsburgh operators being disposed to sign the scale refer chiefly to operators in the Freeport vein.

Some observers are confident the Connellsville region will be fully at work in a few days and that this will shortly cause a break among the strikers in the Pittsburgh district.

The trading market in coal continues to be confined almost wholly to Connellsville steam, which has declined fully a dollar in the week, being now available at \$5. Offerings have increased somewhat, but the decline was due chiefly to decrease in buying. The railroads seem to have been instructed to stay out of the market. Pittsburgh strip-mined coal has been offered down to \$6 and experiences a limited demand. Westmoreland gas stands at about \$6.

CLEVELAND

With the announcement of the acceptance of the Cleveland wage scale by additional important groups of operators, demand has eased off somewhat. Consumers apparently are convinced that supplies soon will be greatly increased. This view is not held by some operators, who depreciate stories that production will reach normal levels soon. Their experience is showing them that

a shortage of cars at the mines is already seriously hampering the resumption of production. In the meantime prices have dropped. Threatened regulation may have had some influence in bringing these down, but it now appears that there will be little recognition of coal prices by the state. Operators have refused to take part in conferences on prices, fearing conflict with the Federal law.

At a meeting of the members of the Ore & Coal Exchange in Cleveland a few days ago, practically the same rules and regulations governing the coal pool of 1920 were adopted. The price arrangement, as in 1920, probably will provide for a settlement of balance price fixed by the committee at the end of the season, applying to all balances outstanding.

For the season to Aug. 20, shipments of coal up the Lakes to the Northwest amounted to 4,675,224 tons of cargo coal against 14,962,793 tons in the same period of 1921, and 9,055,834 tons in 1920.

COLUMBUS

Most of the mines are now getting down to business with a fairly good force of miners and output is growing daily. Car supply has been quite good up to the present.

The state fuel administration is functioning and priorities are taking care of practically all that is produced in the state. Railroads and utilities are still getting the bulk of the tonnage although some is going into other channels. Retailers have not been able to get much coal up to date and are booking orders for delivery later on.

Lake trade is showing some life although the movement to the Northwest is still small in comparison with previous years. Lake shippers have closed a few small contracts at \$3.75 @ \$4.50.

DETROIT

With bituminous receipts averaging about 200 carloads daily, while between 500 and 600 are necessary to meet requirements, Detroit is steadily running behind on coal supply.

Priority orders for about 150,000 tons of coal for Michigan, which were sent forward to the Federal fuel administrator by the Michigan fuel administrator, have been approved only to the extent of about 50,000 tons.

The apparently ineffectual outcome of the efforts to obtain coal through the federal fuel administration has caused a revival of the previously discussed plan of organizing a local pool among Detroit coal men for the purpose of sending buyers into the producing districts in an attempt to get coal without assistance of the federal authorities.

Owing to diminishing coal supply, 85,000 employees of the Ford Motor Co. will be laid off Sept. 16. The company's Highland Park plant is reported to have installed oil-burning equipment in its furnaces. Whether the use of oil will be continued permanently is not announced.

BUFFALO

The trade has reason to feel that the worst is over. This market is not getting any new coal yet and some that was promised has been ordered to the Lakes, but there will soon be enough if things go right. Too much priority is likely to keep prices up, but consumers are waiting for them to come down.

Supply has been pretty good. Jobbers were active and their advice was heeded. Today there are plenty of consumers, large and small, with months of coal ahead of them. So there will be no rush for coal.

Bituminous prices now run from \$7 for Youghiogheny gas, \$6.75 for Pittsburgh lump and slack to \$6.50 for the mine-run, adding \$2.09 to Allegheny valley and \$2.24 to other coal for freight to Buffalo. So far mining resumption in the Allegheny Valley is more general than in the districts further south.

NORTHERN PANHANDLE

So many companies are operating on an independent basis that the contract made with the union has not materially increased output. At mines where there never has been an agreement with the union, production continued at about the same rate, the field as a whole having an output of about 50,000 tons during the week ending Aug. 19. There is a heavy demand at the Lakes and in northern markets, with a large tonnage from the region being utilized by the railroads.

EASTERN OHIO

Operations have been slow in reaching capacity output because of transportation disability and preliminary cleaning up in some of the mines.

During the three days ended Aug. 19, the field loaded in the aggregate 1,010 cars, representing a production of 53,530 tons as against a potential capacity for these three days of 309,750 tons of the 140 mines comprising the field. While a greater number of mines have since gotten under way for much greater production, car shortage has appeared on both the B. & O. and W. & L. E. and is materially curtailing the output.

Inquiries are not numerous and buyers for the rank and file of industry are still in a position to withhold orders, anticipating that prices will react further when coal becomes more plentiful. Larger users such as railroads, steamship lines and steel plants are very much in need of fuel and the major portion of current output is going to that quarter. Spot prices have succumbed to reactionary tendencies and quotations are now \$1 @ \$1.75 less than a week ago.

Receipts of bituminous coal at Cleveland during the week ended Aug. 19 aggregated 636 cars and were approximately the same in quantity as receipts during the two weeks immediately preceding.

Arrangements have been made to pool Lake cargo coal effective Sept. 1, similar to the plan inaugurated during the season of 1920 when total movement up the Lakes exceeded 22,000,000 tons, of which 16,000,000 tons were floated after July 31. At a meeting of shippers, an executive committee was appointed to formulate rules and regulations to expedite the handling of this important traffic to the Northwest.

Northwest

Upper Lakes Region Now Frets About Anthracite

Most Coal Men Believe Adequate Soft Coal Supplies Will Be Shipped Up from Erie Ports but Lose Hope on Hard Fuel—Prices Flighty.

The Northwest is now morally certain it will get enough bituminous coal to meet all its crying wants. While cargoes have not yet begun to arrive under the new distribution plan in any great number, they are expected to begin this week. In spite of a good deal of bleating for priorities which may not be granted, it is generally felt that the Northwest's plight—even though partially brought down by Northwestern failure to conserve the dock coal it had early in the summer—will draw tremendous shipments from now until the freeze-up. But as to hard coal the feeling is different. Coal men are confident that the strike settlement in the anthracite fields will come so late that not a ton of output from those fields will reach here.

The Northwest's propaganda system is still working effectively. It has been so successful in setting forth the region's desperate plight that it may have had something to do with recent hoists in price on what little coal there is available.

DULUTH

The Northwest now feeling sure of plenty of bituminous coal for public utilities and industries is centering its interest upon the anthracite situation. Coal men here think the hard coal strike will not be settled until it is too late to ship much up the Lakes. This will mean that the Northwest will burn smokeless in its house furnaces.

Bituminous is steady and there is little quotation of prices as docks are busy filling past orders. It is said that 75,000 tons, outside of bituminous, still remain on the docks but this has been taken already.

Five cargoes came into port within the last week. This is Kentucky coal and is selling for around \$9 for lump, with 50c. off for run of pile. It is expected that one or two cargoes will arrive daily from now until the first of the month, and that after that shipments will resume in force.

The order to pool coal at Lake Erie ports is causing dissatisfaction among dock men and dealers. Much money has been spent in advertising certain varieties of coal and the pooling will make this advertising ineffective. It is felt though that it is the only way to handle the situation, by the consumer generally.

MILWAUKEE

Watchful waiting is the order of the day. The settlement of the strike in the soft coal fields has eased the tension to some extent, but until coal begins to move and there appears to be some organized system of distribution both dealers and consumers will continue to worry.

Nobody has any idea as to how the apportionment of coal is going to be made, but everybody expects higher prices to rule. Many have switched from coal to coke to make sure of getting some kind of fuel.

Eleven small cargoes of soft coal were received here thus far in August, making the season's receipts of soft coal to date 827,212 tons, against 1,769,043 tons during the same period last year. Car-ferries brought 1,504 tons of anthracite and 54,373 tons of soft coal from the East thus far in August. The bulk of this coal goes direct to the interior, only a small percentage remaining here. Last year up to this time 618,067 tons of anthracite had been received here. Not a cargo

of anthracite has reached port thus far this year.

MINNEAPOLIS

The problem of getting an adequate supply of some kind of coal into the Northwest before the close of navigation promises to be the hardest job yet encountered by the coal industry in this region. The fact that the Northwest had a good supply of coal on the docks last spring and did not take advantage of it, is working against all arguments as to its present and future needs. Minnesota state institutions are now low on fuel and authorities are wondering where they will get some within the next few weeks.

When Central Western railroads came to the Lake Superior docks during the summer and bought a big tonnage, shipping it down to Chicago and vicinity, Northwestern roads were utterly indifferent. True they did buy some tonnage, but far less than their neighbors to the South. Now these same Northwestern roads plead for the same priority that other roads get. So it remains to be seen how much real good priorities and similar documents are going to do. Not a few Eastern producers declare flatly that the Northwest will simply have to go into the market for coal in competition with other buyers,—pay whatever price they have to pay in order to get what fuel is available.

New England

Tension Is Lightened As Inquiry Slackens

Panic Demand Disappears—Comfortable Position of Railroads Will Facilitate Movement All-Rail—Large Output Expected in Next Thirty Days.

This week shows very much less tension. In contrast with a fortnight ago there is apparently no panic demand whatever and current inquiry is notably less than last week. The railroads are in more comfortable position as to supply and it is expected that coal on contracts will begin to flow all-rail as well as by water.

Most buyers are building large upon production the next thirty days, and while there might be danger in this if reserves were low, the fact is that stocks in this territory are adequate for some time to come. Consumers who have deliveries due them on contract are expecting that their September quotas will be filled, and apparently there is small chance now of any runaway market.

Several Pennsylvania operators are diligently seeking spot orders, and to such extent is this true that already quotations are lower than was the case a few days back. Grades roughly

described as "Pool 10" that were offered at as high as \$7.50 have been quoted recently at \$6.50, and with the smokeless coals also easing off in price the trade looks for still lower figures in central Pennsylvania.

While Pocahontas and New River are much involved with priorities, and coal intended for New England has been diverted to railroad and other uses elsewhere, the Hampton Roads agencies are expecting the situation to change materially by the early part of September. There are still spot sales reported at around \$10.50 f.o.b. vessel, usually for small tonnages to clear boats, but shippers will have their own coal restored to them in increasing volume and will be expected to resume shipments on contract.

The trade generally is much relieved over current news from Washington. Ordinary channels have been so upset and so many awkward situations have been created that everybody, the lay distributors included, are happy to see coal beginning to flow in accustomed grooves.

The New England railroads have made such good progress in replacing striking shop craftsmen that there is less anxiety here over equipment than is doubtless the case in other sections of the country.

Meanwhile, cargoes of British coal arrive from day to day and are likely to continue arriving for the next 60 to 90 days. Heavy purchases were made while the labor situation looked serious and doubtless there will be some shrinkages to be absorbed.

Already, British coal is quoted lower than a week ago.

Cincinnati Gateway

"Stand from Under" Policy Seen with Coming of Coal

Intermittent Flurries in Demand for Lake Cargoes Play Hob with Price Situation—Tidewater Reports Discouraging—Line-up at Hoover Prices Expected.

There is a well-defined effort on the part of certain wholesalers to "stand from under" with the changes that have come through the possibility of more coal coming on the markets where extreme values have ruled for the past two or three weeks. The intermittent scrambles for coal to fill Lake cargoes has tended to keep up prices in certain quarters and then abruptly leave the situation up in the air. News from Tide, too, has been discouraging and there are those who profess to see the whole line-up back in the traces at the Hoover prices.

CINCINNATI

Retailers have been here in flocks during the week to pick up coal for customers other than domestic users. Most of them have found that the Hoover prices apply to their wants when they have permits and on all else they must pay premiums.

Smokeless prices have not deviated as much as the splints and gas coals from the values that were set in Washington. Out of the Pocahontas district there is little coal moving at other than the federal figures. Some New River has been taking the top of the market but the tonnage is small.

The local retail situation is the worst in ten years despite all of vaunted supremacy of the city as a point of coal origin. Many retailers are holding back on their orders for the simple reason that they have not coal to fill them. Splint lump has been boosted to \$8.75 and the smokeless to \$1 higher by others. Slack to some plants that have no priority orders has gone as high as \$10.50. This is all-rail coal; the river failed when the test came!

HIGH VOLATILE FIELDS

LOGAN AND THACKER

Logan mines are now producing at the rate of about 200,000 tons a week. There are still a good many mines not running because the car supply is not sufficient to enable the average mine to run more than three days out of the six. The agreement at Cleveland will have no other effect than to force the payment of the 1920 wage scale. Lake shipments were increased during the latter part of August.

Gains are being made in the Kenova-Thacker field in the volume of production under somewhat more favorable transportation conditions. More coal

is finding its way to market and regular customers are being taken care of to a greater extent, although the output is by no means equal to the demand. More coal began moving to Lake points during the period beginning Aug. 18.

KANAWHA

Signing of the Cleveland pact had a tendency to increase production somewhat but a shortage of cars is limiting output to about 80,000 tons a week. Even with more mines in operation it will not be possible to increase production unless railroad facilities are improved. Most of the mines in the field will continue to operate on an open-shop basis but the 1920 wage scale will be paid.

NORTHEASTERN KENTUCKY

With the car supply greatly limited and with only limited motive power available, northeastern Kentucky mines are not producing more than 30 per cent of capacity or about 90,000 tons a week. Car-shortage losses aggregate about 170,000 tons per week. The region is being called upon to ship more coal to the Lakes, and that is tending to cut down the fuel available for regular customers.

LOW-VOLATILE FIELDS

NEW RIVER AND THE GULF

Although handicapped by an inadequate car supply, mines of the New River field are producing more coal on an average than at any other time during the last three or four years. Most plants are limited to about four days a week and mine owners fear a more acute car shortage in view of the fact that there are more mines in operation. All plants in this region are being operated upon an open-shop basis. Operators have posted notices that the 1920 wage scale will be paid.

Gulf mines are managing to slightly increase their aggregate tonnage owing to a somewhat better car supply. This is making for a heavier movement to tidewater and other Eastern markets. The output is still approximately 50,000 tons short of the total attained before the railroad strike.

POCAHONTAS AND TUG RIVER

Conditions are beginning to approach normal once again in the Pocahontas district where with more cars available and motive power in better shape, production has again reached about 350,000 tons a week. Railroad disability losses still aggregate about 230,000 tons per week and some fear is felt lest the increased number of mines in operation and the general condition of equipment cut down the supply of empties in the next few weeks. Although some coal is moving under priority orders, regular customers are getting their share, the Tidewater movement being unusually large.

Tug River mines are able to work more regularly and hence to increase

production, this field now producing at the rate of 90,000 tons a week—only about 10,000 tons under normal production. Under improved transportation conditions producers find it possible to take care of more regular customers than for a time.

Coke

CONNELLSVILLE

On the afternoon of Aug. 22 the H. C. Frick Coke Co., the fuel subsidiary of the U. S. Steel Corporation, informed other operators that it would restore the scale of Sept. 1, 1920, excepting on one point, effective the following day. The scale is the highest ever paid in the region, and represents an advance of between 40 and 50 per cent over the scale of Aug. 1, 1921, hitherto the official scale.

A number of meetings of men have been held, at which sentiment was expressed against going back to work without union recognition, but it is expected that the strikes will play out rapidly, the region having been entirely non-union for more than 30 years.

Foundry Coke is quoted at \$14.50@ \$15, against \$15@ \$16 a week ago, and while there has only been forced buying of late foundries seem to have acquired additional ability to stay out of the market. Furnace coke, quotable a week ago at \$13.50@ \$14, is offered down to \$11.50, there being scarcely any demand.

The *Courier* reports production during the week ended Aug. 19 at 68,430 tons by the furnace ovens, an increase of 3,480 tons, and 14,080 tons by the merchant ovens, a decrease of 850 tons, making a total of 82,510 tons, an increase of 2,630 tons.

UNIONTOWN

The wage scale of September, 1920, allowing increases of from 36 to 58 per cent, became effective in the Connellsville coke region Aug. 23, with the posting of the new scale by the H. C. Frick Co. and independent operators. The scale approximates the rates of pay provided by the Cleveland agreement.

Striking miners both in convention and by local union vote have rejected the wage increase and spokesmen claim that the miners will not return to work until their union is recognized. Imported labor is being brought into the region in great numbers accounting for the weekly increase in production. The new labor, principally Southern negroes, bring their families along and are given houses vacated by evicted miners.

The possibility of great coal supplies has softened the coal market considerably or rather has made buyers wary. Price is once more a big factor in determining sales.

BUFFALO

The market is not very active. Jobbers are able to obtain and sell a little at \$15.50 for Connellsville foundry, \$13 for furnace and \$10.50 for domestic sizes. Increase of wages in the steel industry is held to mean more activity in the near future. Some furnaces here are rumored to have given the increase also.

News. From the Coal Fields

DELAWARE

The duPont Company announces that effective Sept. 1, 1922, the smokeless powder division will be separated from the explosives department and will be operated as an independent industrial department, known as the smokeless powder department, under the guidance of Vice-President A. Felix duPont, as general manager.

ILLINOIS

Havens A. Requa, sales manager of the Columbus Mining Co., Chicago, is spending the latter part of August on a vacation.

C. M. Moderwell, of Chicago, recently returned from a business trip to the Pittsburgh region.

M. F. Peltier, executive vice-president of the Peabody Coal Co., has just returned to Chicago after completing arrangements for the operation of a group of Eastern mines by his company.

Howard Kerehner, mine engineer and vice-president of the West Side Improvement Association, Belleville, has purchased a controlling interest in the Beatty Coal Co., Mascoutah, Ill. He has been elected president and treasurer of the company and Herbert F. Lill has been named secretary. It has been decided to repair the mine and to place it in shape for future operation.

The Shuler Coal Co., with a capitalization of \$500,000, has been incorporated to conduct coal-mining operations on several thousand acres of land in Henry and Mercer counties. This new corporation is the first to go into these two county coal fields. The main office will be located at Alpha, Ill. Exhaustive tests made during the last eight months on the land leased has disclosed large quantities of coal. Shafts will be sunk as soon as the strike situation will permit. Charles Shuler, of Davenport, Ia., is the president and principal stockholder. Hugh Shuler, of Des Moines, Ia., and Jacob Scheib, of Rapid City, Ia., are the other stockholders.

Plans have been made to reopen the old Garvin mine, east of Paris, which has been abandoned for several years. Machinery is being assembled. The old shaft is to be repaired for use as an airshaft and as an emergency escape. A new shaft will be sunk for mining operations.

Two country coal mines near Cuba were damaged by dynamite exploded by unknown persons. The boiler of the Murphy mine was blown to pieces by a heavy charge and the slope of the Rowden mine was wrecked. No one was injured. The Murphy mine is located two miles southeast of Cuba and the Rowden mine about three miles south.

INDIANA

A company representing the Freeman interests of Terre Haute, Ind., which several months ago purchased extensive mineral holdings at the northwest corner of this city, is now sinking a new mine on the Coffman farm, east of Sullivan. A vein of No. 6 coal has been found. It is stated that the company will erect a modern top plant.

The New Coal Co. has been organized at Bicknell with a capital stock of \$60,000 for the purpose of doing a general mining business. The organizers of the company are Leopold Escaffre, Louise Nocus, Lloyd Beggeman, William Bailey, Thomas M. Staley, Charles Thompson and Joe Bernardi.

The B. & N. Coal Co., of Sullivan, has been organized with capital of \$24,000 to operate coal mines. The incorporators are J. Bolinger, Ralph Butler, Fred W. Newton and J. W. Work.

KENTUCKY

The Coal Supply Co. has been incorporated. Capital stock is \$15,000, debt limit, \$100,000. J. H. Schneider, C. E. Roth and E. Schneider, are incorporators.

W. H. Barnes, 31, mine foreman for the Bennetts Fork Coal Mining Co., was caught in the electrical pump at the mine near Middleboro, Aug. 13, and crushed to death. Barnes is survived by a widow and a mother, Mrs. Ida Meyers.

A band of unidentified men made another attack on the state guardsmen stationed at the Sunlight Mine, near Madisonville, at dawn Aug. 16, and though a battle ensued no one was struck by the bullets. The attack was the third during the week and a determined effort was made to rush the machine gun manned by guardsmen.

The Apex Coal Co., operating at Apex, near Sergeant, on the main line of the L. & N., is rushing work on a modern tippie. Bucket conveyors are also used there in running the coal from one side of the mountain to the other. Coal will be run through the tippie on the opposite side.

MISSOURI

The Big Four Mining Co. is opening mines near Carrollton. It is reported that three of these will be opened up at once, the first one on a shaft east of town.

The Johnson mine, on the Cox farm, 6 miles northeast of Meadville, is being reopened by Mr. Cox.

Work on sinking the Rye Creek shaft 3½ miles northwest from Kirksville on the Burlington is progressing. This mine will be operated by electricity and will be unionized. Several miners' cottages will be built to take care of the miners.

Work on the Mosby coal mine, near Excelsior Springs, is going forward rapidly. The shaft, 16x20, is now down 140 ft. with coal at 220 ft. From the present depth the shaft will be 14x18 and drifts with pumps are being installed at the 140-ft. level on account of quicksand.

The first sailing of the fleet of Edward F. Goltra was made on Aug. 7, when nineteen barges and four towboats left St. Louis for Caseyville, Ky., where twelve barges will be loaded with approximately 10,000 tons of coal for the St. Louis Coke & Chemical Co.'s east side plant at Granite City. The second towboat is being converted from a coal to oil burner and will take on a cargo of coal at Caseyville.

This fleet has a contract to carry 51,000 tons of gas coal for the public utilities at Quincy, Rock Island and Moline, Ill., and Muscatine, Burlington, Davenport and Dubuque, Iowa. This will all be loaded at Caseyville, Ky. It is understood that the first tow of coal has been accepted at a rate of 20 per cent below the rail rate, which is the same differential as that offered by the government river service.

NEW YORK

The Island Creek Coal Co. for the first half of 1922, reports net profits, after charges and taxes, of \$1,978,427, equal, after allowing for the regular dividends on the preferred stock, to \$15.39 a share on the 118,798 shares of common stock. In 1921 the net profits were \$1,910,548, equal to \$14.80 a share. Total earnings for the first half of the year were \$2,697,780, and expenses, depletion, depreciation and taxes totaled \$719,353.

The annual convention of the New York State Coal Merchants' Association will be held in Richfield Springs, Sept. 7-9. The long and varied program will include addresses on "Modern and Efficient Methods of Coal Handling," by Alexander Macomber; "Some Aspects of the Coal Situation," by G. N. Snider, and "Buckwheat Coal and Spencer Heaters," by Charles N. Tull. There will be the usual round of entertainment as well as a program of athletic events.

OHIO

New offices opened in Cincinnati by coal companies are: Lake & Export Coal Co., in the Dixie Terminal Bldg., with E. L. Moses, formerly in charge of the retail department of the E. L. Frechtling Coal Co. Edward F. Gerber has opened an office there as agent for the Superior Elkhorn and the United Coal Mines.

Ray Alexander, who for a time was associated with the Boone County Coal Corporation, has become associated with the Ogle Coal Co. and will have his headquarters at Cincinnati.

OKLAHOMA

The Texas Pacific Coal & Oil Co., of Fort Worth, Texas, has been granted a permit to do business in Oklahoma. The company is capitalized at \$500,000 with R. D. Hunter, of St. Louis; Edgar L. Marston, and Horace K. Thurber, of New York, as incorporators.

PENNSYLVANIA

The Northwestern Mining & Exchange Co. is about ready to operate its new property at Cramer, near Dubois, Pa. There are two shafts 300 ft. deep each with electric hoists; in fact the mine is thoroughly electrified. The operation represents an outlay of \$2,000,000.

Construction of coal-loading docks in the Lehigh Canal, near Northampton, six miles north of Allentown, by the Lehigh Coal & Navigation Co., preparatory to abandoning its large loading plant at Coalport, near Mauch Chunk, has been started. The company will spend \$500,000 on the new undertaking. The transportation of coal by canal boats from Coalport to Philadelphia has been much handicapped, officials say, by spring freshets.

The docks will compel, it is said, the building of immense yards at Northampton by the New Jersey Central, which will bring the coal to that place instead of Coalport.

So far eighty-six anthracite producers of the state have appealed to the Dauphin County Court at Harrisburg from payment of the anthracite tax of 1921. This number includes practically all of the big producers and individual operators who are liable, if the act is finally declared to be constitutional, for the bulk of the State tax. The Mill Creek Coal Co. raised the question of ascertaining coal values for assessment purposes and the Scranton Coal Co. bases its objection to the law on the contention that the Auditor General cannot tax coal used in production, claiming that the tax should be levied only on that coal prepared for the market, deducting that coal used in the processes of mining. The dozen or more coal dredging firms will probably file another appeal, based on the claim that their business is not mining under the terms of the act and that the coal they get was once mined in anthracite counties. One hundred and ninety-seven anthracite producers are listed on the books of the Auditor General's Department and all of these have received notices from the state regarding the collection of the coal tax. The records of the State Treasurer show that payments amounting to \$7,464,26 have been made in anthracite tax so far, this money coming from but sixteen companies.

The Victory Coal Mining Co., operating the Haws mines at Holsope, on the Somerset & Cambria branch of the B. & O., resumed operations recently on a non-union basis with its own men, at the 1917 scale, which is the same the company paid before the mines closed. The mines went out on a sympathetic strike on April 15.

Something new in coal mining in central Pennsylvania has been undertaken at Glen Campbell, where the Urey Coal Co. has started operations on a strip mine. The vein at Glen Campbell is 10 to 12 ft. below the surface and can be taken out more advantageously by this method. A. W. Riddell, of Altoona, is head of the Urey company. The tract covers approximately ten acres and approximately 100,000 tons will be recoverable by the method.

TENNESSEE

The West Virginia-Tennessee Coal Co. has been incorporated with capital of \$15,000 by T. O. Busbee, Thomas Lockhart, W. H. Workman and Julius Kersten. The company will develop properties near Anderson.

An important coal development is that of Pocahontas & Sewanee Coal & Iron Co., which has recently purchased 10,220 acres of Sequatchie County coal land, at a cost of about \$400,000. Capacity will be 5,000 tons a day, when steel tippie and 1,000 ft. tunnel are completed. Mid-western capital is chiefly interested. Former Governor Harding, of Iowa, is president of the company.

TEXAS

The Texas Ice & Fuel Co. of Houston, Texas, has been chartered with a capital stock of \$100,000. Incorporators are: N. L. Casperson, E. S. Beaman and A. J. Casperson. The company will conduct a retail coal business in Houston in connection with its wholesale and retail ice business.

WASHINGTON

D. C. Botting, for many years connected with the coal-mining industry in this state, returns on Sept. 1 to become manager of mines of the Pacific Coast Coal Co., Seattle. He has for three years past been general manager of the Vandavia Coal Co.

Mr. Botting was born in California fifty-one years ago, and when a boy worked in



Photo by Bushnell

D. C. BOTTING

the mines at Nortonville. In 1901 he was appointed state mine inspector in this state, in which capacity he served until 1912, when he resigned to take charge of the mining end of the government party which went to the Alaskan coal fields to determine the suitability of those coals for naval purposes. On his return he became commissioner of the Washington Coal Operators' Association and manager of the Producers' Association. During the latter end of the war period he was appointed coal distribution manager for the state under the U. S. Fuel Administrator.

WEST VIRGINIA

Preparations are being made by the Acme Coal Co., of Shinnston, to develop coal lands in Harrison County, this concern

having only recently been organized with a capital stock of \$50,000. Offices of the company are to be at Shinnston. Leading figures in the new concern are: Basil H. Lucas, T. W. Brackman, of Shinnston; George W. Simpson of Johnstown, Pa.; L. C. Crile and A. M. Leonard, of Clarksburg. The strike cut down the enrollment for the miners' short course of six weeks at the West Virginia University. Notwithstanding the strike, however, there were sixty-nine students enrolled.

Charleston people have organized the Kanawha By-Product Coal Co. for the purpose of operating in the Kanawha region, the offices of the company to be at Charleston. This company has a capital stock of \$50,000. Having an active part in organizing this company were: G. K. Guthrie, A. S. Jenkins, J. W. Smiley, D. W. Orth, T. C. Patterson and R. R. Circle, all of Charleston.

Organization of the Rosehill Coal Co., by Philadelphia capitalists presages the further development of coal property in Taylor County. This company has been chartered with a capital stock of \$100,000, headquarters to be at Rosemont. Principally interested in the new concern are J. H. Weaver, John E. Cupp, C. M. Johnson, J. F. Macklin, James W. Birch, L. G. Ball and Stewart Frazer, Land Title Building, Philadelphia.

George S. Brackett has been named as the government's representative in northern West Virginia. Mr. Brackett is the secretary of the Northern West Virginia Operators' Association.

L. E. Wood, G. S. Patterson, T. H. Huddy, L. E. Armentrout and George Bausewine, of the Williamson Coal Operators' Association, have been named as members of a committee to distribute current coal production and restrict unfair prices.

The Kime Coal Co., Ellamore, capital \$250,000, has been formed. Incorporators are A. Ward, Otis Reichsein, A. T. Kime, E. G. Zauner, Josephine, and Robert McFarlane, Buckhannon.

BRITISH COLUMBIA

The Chu Chua Coal Co., a Seattle concern, has restarted the development of its property near Kamloops, which it closed down at the end of last year, after producing several hundreds of tons of coal. The company has done a considerable amount of tunnelling, drifting and diamond drilling. The Glenville Collins Engineers, Ltd., of Vancouver, also is doing a large amount of exploration work in this district. The coal field is described by Professor U. L. Uglow in Part A of the sum-

mary report of the Canadian Geological Survey, for 1921, which has just been issued.

ONTARIO

The Black Diamond Coal Co., Ltd., has been organized with headquarters at Toronto. The charter just issued authorizes the company to engage in the wholesale and retail coal business. The authorized capital is \$40,000 and the provisional directors are J. L. Ross, L. V. Sutton and E. M. Carruthers, of Toronto.

E. J. Ryan, vice-president of the F. A. Fish Coal Co., Ltd., Toronto and Pittsburgh, has resigned his position after seven years service with the company.

The government peat plant, at Alfred, which was tried out last year giving satisfactory results, is now in full operation. B. F. Haanel, of the Federal Mines Branch, states that the quality of peat being produced is first class and that large orders for it are being received daily. Its cost in Ottawa is \$10 per ton.

WASHINGTON, D. C.

Senator Ladd, of North Dakota, has presented to the senate a petition of the Federated Shop Crafts of Mandan, N. D., asking that the government take over and operate coal mines and railroads to safeguard the welfare of the people.

D. F. Hewett is acting as chief of the section of metalliferous deposits of the U. S. Geological Survey.

Dr. Dorsey A. Lyon, chief metallurgist of the Bureau of Mines, after several months spent at western stations of the Bureau of Mines, has returned to Washington.

Harry E. Meyer, chief clerk of the U. S. Bureau of Mines, is visiting in the experimental stations with the idea of improving office management and standardizing office clerical procedure.

C. E. Augustine, a fuel engineer of the Bureau of Mines staff, at the request of the Veterans' Bureau, will visit all hospitals, making recommendations as to the improvements that may be made in fuel-burning equipment and in the selection of fuel.

T. P. O'Hara, who has served for many years as an assistant to the Director of the U. S. Geological Survey, has resigned to undertake the practice of law.

George S. Rice, chief mining engineer of the U. S. Bureau of Mines, is making a tour of the western mining states and will also visit British Columbia before his return to Washington.

Traffic News

Coal companies operating in the McRoberts region of Kentucky have asked the Interstate Commerce Commission for the same railroad rates as apply from mines in the Hazard group. It is contended that these mines are geographically and geologically a part of the coal region embraced in the Hazard group of mines and that the same rates should apply from the McRoberts group to Cincinnati and Louisville and to other points in Central Freight Association territory and to points in certain of the western states. The complaint is filed by the Commercial Coal Co., Blackey Coal Co., Marian Coal Co., Dudley Coal Co., Rockhouse Coal Co., and the Consolidated Fuel Co.

The traffic case of the West Kentucky Coal Bureau versus the Louisville & Nashville R.R. will be the subject of a hearing at Louisville on Sept. 16 before Examiner Fleming.

The traffic case of the Virginia Coal Operators' Association versus the Aberdeen & Rockfish R.R. will be the subject of a hearing at Washington Sept. 21 before Examiner Gerry.

The case of the Gulf Coal Co. versus the Virginian Railroad Co. will be considered at a hearing at Washington on Sept. 22 before Examiner Gerry.

Oral argument in the case of the Clay County Coal Operators' Association versus the C. & M. R.R. will be held at Washington Oct. 24 before Division 3 of the Interstate Commerce Commission.

In a complaint to the I. C. C. the Sewell Valley Railroad alleges unreasonable and inequitable divisions of rates on coal by the Chesapeake and Ohio.

Oral argument in the matter of rates on coal from the Southwest to Omaha, Neb., and related points will take place in Washington Sept. 14 before Division 3 of the Interstate Commerce Commission.

The case of the By-Products Coke Corporation versus the Director General of Railroads will be the subject of a hearing at Chicago on Sept. 14 before Examiner Hillyer of the Interstate Commerce Commission.

W. D. Robb, of Montreal, Can., has been made vice-president and general manager of the Grand Trunk Railway System. He is to "exercise the authority and perform the duties hitherto exercised and performed by the president," according to an official announcement. Howard G. Kelley, former president, has resigned and Graham A. Bell, deputy Canadian minister of railways, has been appointed titular head of the system.

Coming Meetings

New York State Coal Merchants' Association will hold its annual meeting at Richfield Springs, N. Y., Sept. 7-9. Executive secretary, G. W. F. Woodside, Arkay Bldg., Albany, N. Y.

Coal Mining Institute of America will meet Dec. 13, 14 and 15 at Pittsburgh, Pa. Secretary, H. D. Mason, Jr., 911 Chamber of Commerce Bldg., Pittsburgh, Pa.

Alabama Mining Institute will hold its next meeting Oct. 3 at Birmingham, Ala. Secretary, J. L. Davidson, Birmingham, Ala.

Coal and Industrial Exposition under the auspices of the Huntington Chamber of Commerce will be held Sept. 18-23 in the Chamber of Commerce Bldg., Huntington, W. Va.

The West Virginia-Kentucky Association of Mine, Mechanical and Electrical Engineers will hold its annual meeting in connection with the Coal and Industrial Exposition at the City Hall, Huntington, W. Va., Sept. 19-22. Secretary, H. Smith, 212 Robson Pritchard Bldg., Huntington, W. Va.

National Exposition of Chemical Industries will hold its eighth national exposition at the Grand Central Palace, New York City, Sept. 11-16. Manager, Charles F. Roth, Grand Central Palace, New York City.

American Mining Congress. Twenty-fifth annual convention and exposition of mines and mine equipment will be held at Public Hall, Cleveland, Ohio, Oct. 9-14. Executive offices, the Hollenden Hotel; E. C. Porter, convention manager.

National Exposition of Power and Mechanical Engineering will be held at the Grand Central Palace, New York City, Dec. 7-13. Manager, Charles F. Roth, Grand Central Palace, New York City.

American Institute of Mining and Metallurgical Engineers will hold its fall meeting during the week of Sept. 25 at San Francisco, Cal. It is proposed to arrange for a party to leave New York on Sept. 10, stopping at different cities en route. Secretary, F. F. Sharpless, Engineering Societies Building, New York City.

American Chemical Society's annual fall meeting will be held Sept. 4-9 at Pittsburgh, Pa.; divisional meetings will be held at Carnegie Institute of Technology and general meetings at Carnegie Music Hall.

The Rocky Mountain Coal Mining Institute will hold its next meeting at Glenwood Springs, Col., Sept. 7-9. Secretary, F. W. Whiteside, Denver, Col.

National Safety Council. Eleventh annual Safety Congress at Detroit, Mich., Aug. 28 to Sept. 1. Executive secretary, W. H. Cameron, North Michigan Ave., Chicago, Ill.